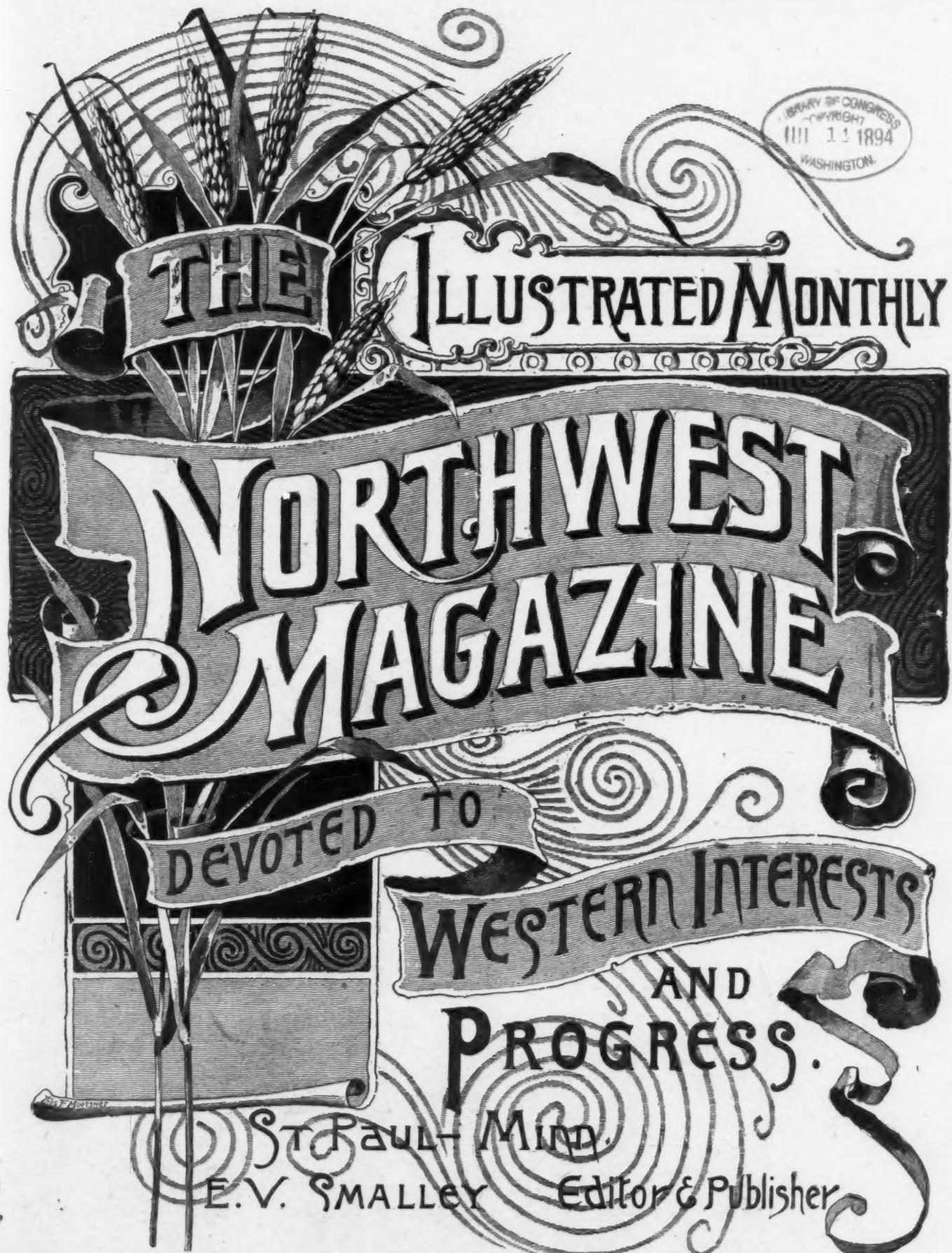


JULY, 1894. VOL. XII. NO. 7.



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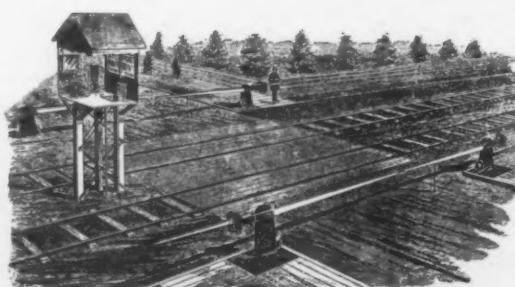
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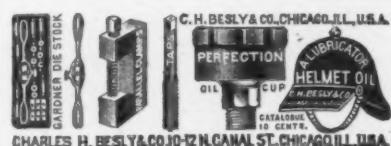
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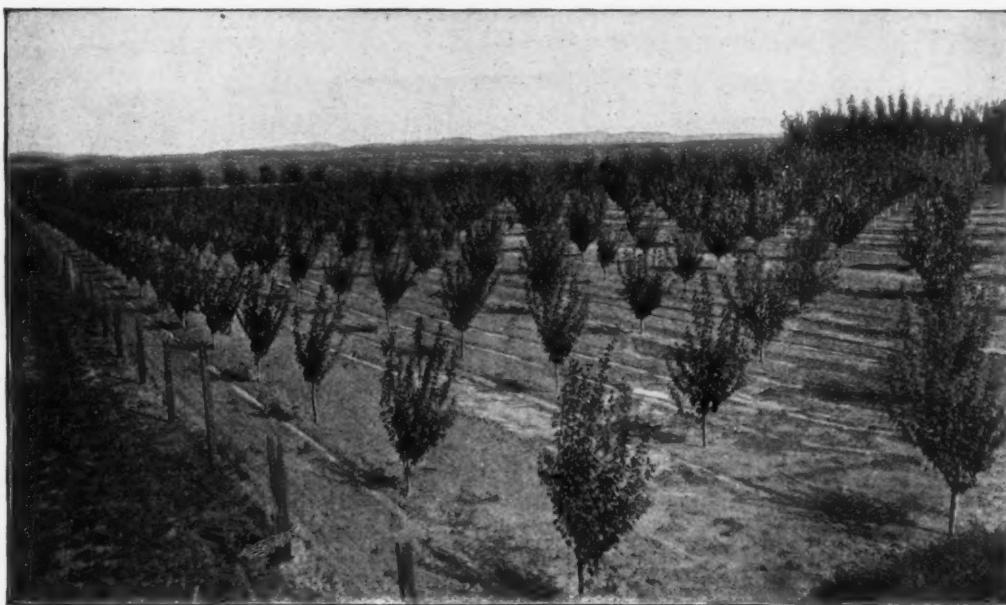


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Climate.—The summer climate of the Yakima Valley resembles that of the California valleys, in the length of the growing season, the number of sunny days, the absence of late spring frosts and early fall frosts and the immunity from destructive storms. The winters are short and not at all severe.

Soil.—The soil of the valley is a rich brown loam and is of phenomenal depth. In places where a vertical surface has been exposed along the brink of the second bench, the depth is over eighty feet, and the soil at the bottom is just as rich as that near the top.

Productions.—This is beyond question the best fruit country in the United States for the raising of apples, grapes, pears, peaches, apricots, plums, prunes, berries and melons. It is also a better hop country than the famous hop valleys on Puget Sound, for the reason that the hop louse cannot endure the summer heats and dies before doing any damage to the vines. Old hop yards in the neighborhood of the town of North Yakima have given large and almost uniform yields for ten years. Alfalfa is the forage crop and yields five or six crops a year. Garden vegetables give enormous returns and are profitably grown for the markets of Tacoma and Seattle.

Special Advantages for Fruit Culture.—All the lands under the Sunnyside Canal lie within a few miles of stations on the main line of the Northern Pacific Railroad; refrigerator cars are furnished and fresh fruit can be put in good condition into the Sound cities on the west, and Spokane on the east, and can be sold in competition with California fruit in all the mining towns and camps of Montana and Idaho, in the towns of North Dakota, South Dakota and Manitoba and in the cities of St. Paul, Minneapolis, Duluth, Superior and Chicago. The Washington growers will monopolize these markets as soon as they can supply them, for the reason that Washington fruit is much better flavored than that of California.

Ten Acres Enough.—A settler who cultivates well, in fruit, vegetables and alfalfa, ten acres of this wonderfully productive Yakima Valley soil, will have all the land he can attend to and will make a good support for a family. With twenty acres he can make a net income of from two to three thousand dollars a year.

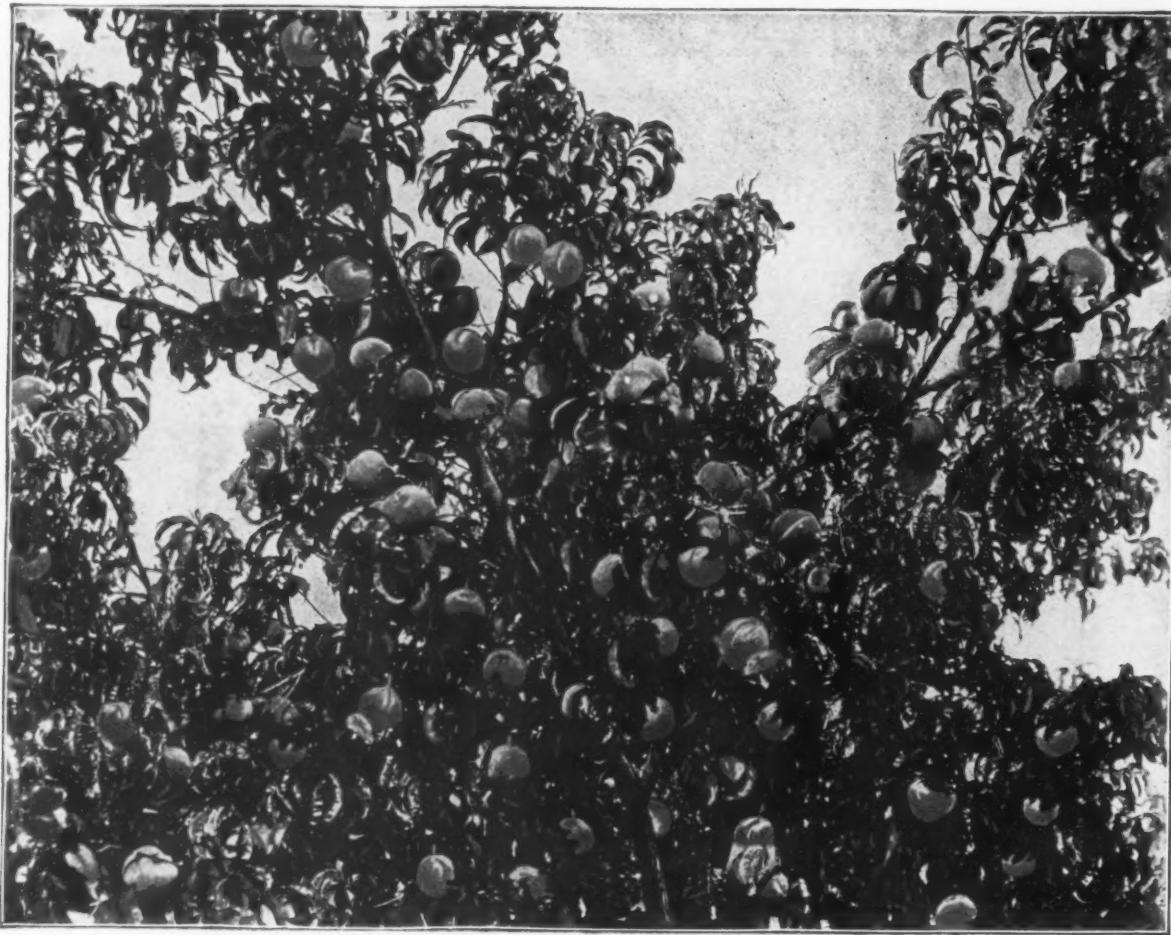
Farming by Irrigation.—Irrigation makes the farmer independent of the weather. He applies just the right amount of moisture to his land to secure the largest possible crop returns. No failure of crop is possible. The process is not laborious or expensive. The water is turned on the land two or three times during the growing season.

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The lands of the Northern Pacific, Yakima and Kittitas Irrigation Company are sold with a perpetual water right guaranteeing an ample supply of water for all crops. Prices range from \$45 to \$65 an acre. One-fifth of the purchase price is payable in cash on the signing of the contract. The second payment is not due for two years. Thus the settler has time to make his improvements and realize on his first crop before being called on for the next installment on his land. The remaining payments run through four years. One good crop will pay for the land. The company prefers to sell to actual settlers only in order that the country may be densely settled and brought under a high state of cultivation as rapidly as possible.

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The Lower Yakima and Kennewick valleys offer lands with more advantages, at a lower price, with the greatest increase in value, and by far the safest guarantee for investment in the United States. Nature having lavished her gifts here so as to insure success, crops follow with no chance of failure. Expend the same time and money here that you do trying to grow a crop east of the Rockies, where drouth and floods, wind and cyclone, hail and snow, bug and rust give battle, and you will reap abundant harvest. Irrigation gives rain when needed, and without devastating storms.

We can clear our land of sage-brush at from one to two and one-half dollars per acre. We grow fruit here when it is too cold at higher elevations—it is here 330 feet. Apricots yield per acre, \$210 net to \$1,200 net. Peaches per acre yield over \$1,200 net, profits depending upon age of trees; yellow-egg plums, French prunes, pears, grapes, etc., in proportion. Mr. W. J. Bauer, of Kiona, Washington, states:

"I came here from California and purchased my land of the Yakima Irrigating and Improvement Company three years ago, for which I paid \$35 per acre, including water right. Strawberries ripened the eighteenth of May, 1893, and the season was two weeks late at that. I found ready sale for them at \$1 per gallon and could have sold many more than I raised at same price. I had orders from North Yakima that I could not fill, as their strawberries did not ripen until June.

My raspberries ripened in May and the cherries the last of May. We had ripe peaches on the trees the twelfth of July, 1893, also apricots, and we shall see the last of the peaches in September. Received \$53 for the melons from about one-half acre last year—and this in my orchard. The early melons sold for forty cents apiece because I picked them over two weeks before they ripened, at North Yakima or Ellensburg. I picked the first ripe melon of the season to-day, July 27th. My alfalfa in 1892 cut about eight tons per acre, and sold at \$12.50 per ton in the stack. We can cut five crops per year, while up in the Yakima Valley, about 100 miles nearer the Cascade Mountains—near North Yakima—they only cut four crops. This year the yield is heavier than last, and I am getting more than two tons per acre per cutting. Vegetables of all kinds grow in abundance. I raised a watermelon weighing fifty-five pounds. Am having good success in raising hogs on alfalfa and am not feeding them any grain. Can pasture here from March to the last of December. Shall be pleased to correspond with anyone wishing to settle in Washington."

To appreciate the value of these lands one ought to examine them, for it will seem strange to one not posted that thousands of acres may be bought at \$25 to \$50 per acre in the same county, with just the same kind of land and soil as those farms selling at \$200 to \$800 per acre. The following lands that I offer for sale are such lands

as can be made to produce the same profits as the most valuable land in the State:

1. Fine apricot land, within one and one-half miles of Northern Pacific Railroad station, in ten-acre tracts, or an eighty acre farm at a bargain. This land is all under the irrigating canal.

2. For sale near Kennewick, on the Columbia and within three miles of railroad station, 160 acres fine prune land; will sell in small tracts if desired. Price \$35 per acre—all level land and under canal; five-year contract.

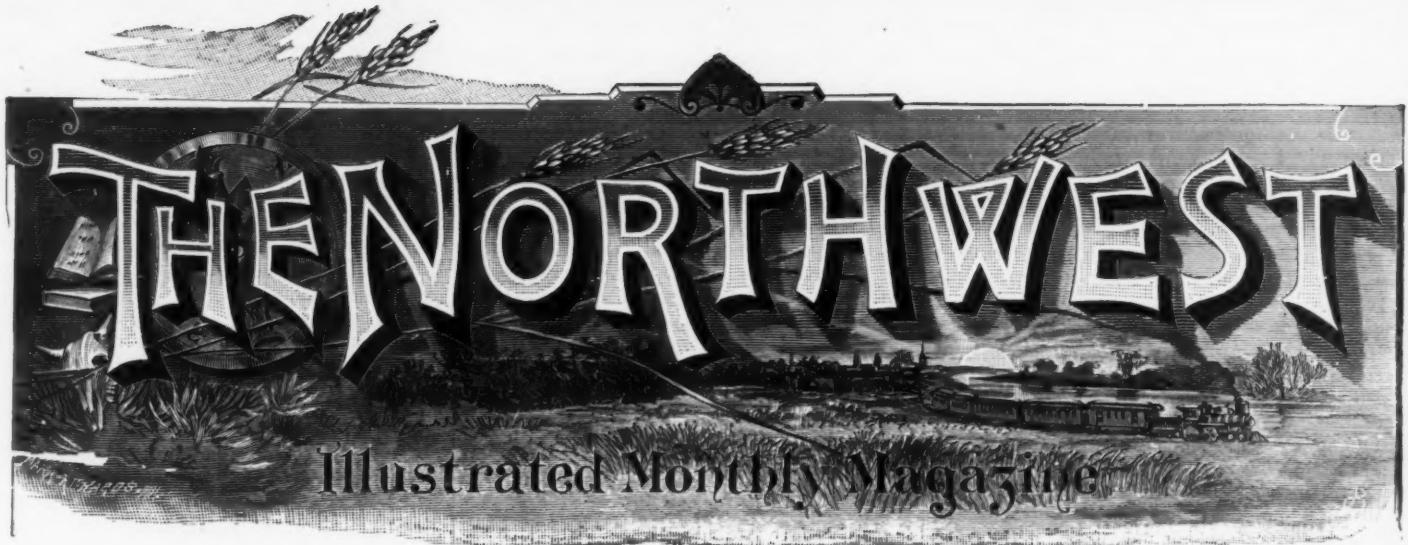
3. As fine hop land as there is on the Yakima River; price \$25 per acre. Terms, one-fifth down, one-fifth after two years, and one-fifth each year thereafter for three years.

4. 160 acres of land within a few miles of Northern Pacific Railroad station, \$50 per acre, with water-right. Will sell any part of same or several hundred acres of the Yakima Irrigating and Improvement Company's lands.

5. 640 acres of excellent hop, alfalfa, corn and potato land, second to none in the Northwest, and for small fruit farm the most desirable in the county; price \$50 per acre, with water-right. This is within easy drive of railroad station; the Yakima Irrigating and Improvement Co.'s land; terms, five-year contract.

6. Extra peach land about eight miles from railroad station on the river; the railroad may be reached by water. Any part of 320 acres at \$25 per acre. Five years' time; one-fifth cash.

YAKIMA IRRIGATING AND IMPROVEMENT CO., Kennewick, Wash.



THE NORTHWEST

Illustrated Monthly Magazine

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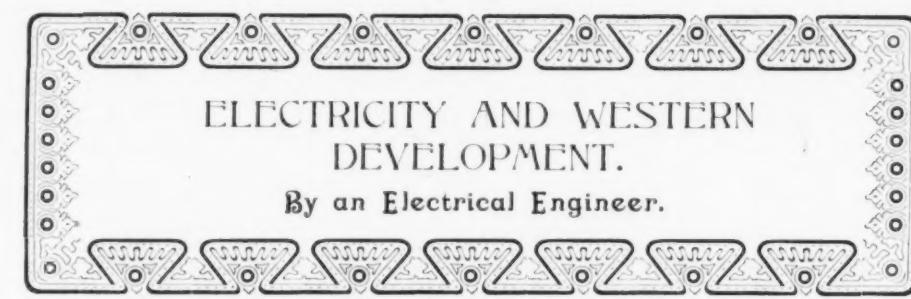
VOL. XII.—No. 7.

ST. PAUL, JULY, 1894.

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ELECTRICITY AND WESTERN DEVELOPMENT.

By an Electrical Engineer.



The knowledge has not reached the American people that there is a section of country in the United States destined in the near future to become the theater of an industrial revolution greater than any precedent in the world's history. The cause is the creation of electric light, heat and power by the utilization of falling water. The section to which allusion is made consists of the States of Washington, Oregon, Montana, Idaho, California, Wyoming, Nevada, Colorado and the Territories of Utah, Arizona and New Mexico, with an area aggregating 1,175,490 square miles, which will be designated here as the Western section, in distinction to the geographical divisions comprising the States and Territories on the east of it, and extending to the Atlantic Ocean, containing altogether 1,794,510 square miles, to be known as the Eastern section. It will be noticed that, contrary to popular impression, the Western section nearly approaches in size its Eastern neighbor, and, as investigation will show, possesses a capacity for useful production far beyond that of any corresponding portion of the earth's surface.

The physical characteristics distinguishing the two sections relate chiefly to differences in conformation and climate. One is mountainous and reasonably dry and the other relatively flat, with precipitation controlled by no fixed laws, but from such principal differences arise so many minor influences, having effect upon the comfort and health of humanity and upon the production of the essentials of life, that a comparison between the two sections is somewhat difficult to make. Further than this the Eastern section has had for centuries the benefit of large expenditure of capital, and the best efforts of a constantly increasing population to develop resources which are now apparent, while on the other hand those claimed for much of the West must, in their present condition, be left to the imagination for proof of existence; but fortunately the genius of the inventor has devised an agency which, with

a recognition of its potentialities, will attract attention to possibilities as yet only faintly realized. The invention that is to be the Alladin's lamp of enchantment is the dynamo, and its complete application for purposes of creating light, heat and power will mark the beginning of an era of prosperity never before equalled. Under existing circumstances the offices of the electric current have been largely confined to the production of light alone because of the greater economy of the processes for making power in steam and heat for radiation by the direct combustion of coal. Electricity as thus circumscribed is a luxury solely for the rich or for trade purposes, exceptional in the character of their demands. It is an element that is self-renewing, inexhaustible and free as air; but in exacting contributions from the vast store-house of nature, forces must be put into motion which will operate continuously, and practically at no cost.

Except in favored localities in the East, the Western section holds monopoly in its unlimited waterpower. When thus produced electricity can be utilized to turn night into day. It will banish at once gas-works, cooking stoves, heating furnaces, chimneys and smoke. It will abolish boilers, engines, coal and ashes. It means an uncontaminated atmosphere and freedom from damage to goods and fabrics. However great and far-reaching may be the industrial changes likely to ensue as the result of relatively free light, heat and power, they are small in importance compared to the wealth of natural resources in the West which such changes will introduce to the activities and ambitions of the world's inhabitants. To one who has made a study of this section it would seem as if nature had for thousands of years been quietly preparing to surprise humanity with an exhibition of her bounties absolutely perfect in its conception and combination, and the dynamo was to be simply the crowning feature, to open the eyes of man to the richness of the gift. First this

beneficent dame corrugated the surface by lifting successive chains of mountains extending generally in a direction parallel to the sea coast, the crests of which tower in the clouds, but care was taken to leave gaps at convenient intervals through which transportation could pass and the warm breezes blow. Next she sends against and along the shore an enormous ocean stream, originating in the waters of the Orient and carrying with it the continuous warmth of tropics. During the winter season she causes the trade winds to blow, which, in their passage across the Pacific, become saturated with its moisture and tempered by its moderation. This wind, known on shore as the "Chinook," blows eastward and such of it as is lifted by pressure of movement to the heights of the mountains deposit there, in proper proportion of distribution, vast quantities of snow, banked for subsequent usefulness. Such of the wind as proceeds unchilled through the low passes conveys to the interior in its velvety softness a suggestion of spring; and as the rain-fall is confined to the winter months, spring, summer and autumn are a rarely interrupted continuation of sunshine through which seed is planted, germinated and pushed to a perfect and abundant harvest. The laborer under such conditions is relieved from the physical dangers involved in sudden climatic changes and exposure to extremes of temperature.

Dividing the elevated ranges are basins varying in size which for centuries have been the receptacles of the wash of the mountains, the soil thus made being really a combination of chemicals best suited for plant growth, which in the upheaval of the surface was lifted from the bowels of the earth and through ages of exposure to the air and elements made ready for the intended purpose. Every valley has abundant water supply in streams which head among the mountains and are fed by the congealed accumulations of the previous winter, slowly melting as the sun gains strength and the supply naturally and automatically regulated, so that the same heat that in the valleys demands moisture for the crops unlooses it on the mountains sides to meet such requirement. Some of this water, after absorbing ammonia and other valuable qualities from the atmosphere, runs on the surface in riverlets and streams directly to replenish the fields below while much of it sinks into the earth to gain by percolation soluble richness from the volcanic matter and decomposed limestone of which the mountains are composed, only to reappear in springs at lower levels to join the common stream. With rare exceptions the lands of the valleys have exactly the requisite degree of slope

to insure an even flow of water over the surface and the streams run at such a grade that canals for irrigation can be economically constructed to carry supplies out to contiguous cultivated fields.

It will thus be seen that the operations of the agriculturist are carried on with the certainty of maximum results. He has all the forces of nature under absolute control and can in the beginning of a season, with the knowledge of the character of his soil and his facilities for water supply, calculate with a certainty precisely what the yield will be at the termination. Starting with a soil as rich as nature can make it, with seasons arranged as if for his special use, with rain quietly stored in neighboring mountain heights to come at his bidding, instead of precipitating itself, frequently with dangerous violence, at unwelcome seasons, with reservoirs of liquid manure needing only to be tapped, with a climate constantly inviting out-door labor, and with no uncomfortable heat or cold to encounter—what conditions supposed to have existed in the Garden of Eden are lacking in this? But the list of attractions of the mountain States is not yet complete. There is no stagnant water to breed malaria, and the dryness of the atmosphere is an insurance against decomposition of animal and vegetable matter to generate epidemics. There being no moisture permanently in the ground there are no long waits in the spring for the melting of the frost before the labor of plowing and seeding can commence, and for the same reason all travelled roads are as perfect as any combination of material can make them.

The charm of scenery in the mountain valleys is an inspiration to higher motives and the sunshine a constant stimulant to the spirits. As if to smother the inhabitants with advantages, the mountains and foot-hills are carpeted with grass of the most nourishing character, which in the summer is a pasture and in the winter as cured on the ground equal to a trough kept continually full of grain. There are millions of acres of the finest timber, and building stone of every kind and grade known to the science of geology. Iron and copper, gold and silver, lead and zinc—the precious and the useful strive to see which can in the greatest abundance occupy the uplifted veins. No cyclones can gather strength for destruction because the mountain peaks break up and scatter the force of the clouds and winds, and thunder and lightning are a rarity of atmospheric disturbances. All advantages here enumerated have existed for centuries and attracted but little attention, the reason for which may be charged, first, to the over-shadowing influence of the mining interest. The Western section having gained renown as a mining region, in the mind of the public this is incompatible with the possession of advantages for any other industry. The precious metals exert such a degree of fascination over the human intellect that when under such influence it is difficult to find lodgment for any competing thought; hence the exclusive occupation by a scanty and shifting mining population of a region more magnificently endowed for the support of a multitude of people than the mind of man has been able heretofore to conceive of. In contemplation of such a result one is inclined at first to regard the mineral wealth as really a curse. It certainly under the existing system carries few lasting benefits to the community, but in the light of coming events there is reason to hope for such changes that the preponderance of the mining interest will not always last, and that in the future its yield will remain in the localities as an addition to the reserve of wealth instead of going abroad for the enrichment solely of foreigners.

Having touched upon the general advantages of the mountain region and the reasons for the apparent lack of their appreciation, it will be

of interest to consider by comparison between the Eastern and Western sections which will benefit most by changes to come and the probable effect of such changes on special industries. In the former we are told by statistics that there is annually lifted from beneath the surface, roundly, 200,000,000 tons of coal, while in the other, the equivalent many times of that in power is tumbling over rocky ledges or running in rapid streams idly to the sea. In the East, owing to the absence of elevated mountain ranges and evident lack of storage facilities, with the exception of Niagara and a few other localities, there is no reliable source of water supply applicable for economical power purposes, and unless invention is able to utilize wind and other natural forces this section must in the main continue to depend upon coal for light, heat and power. On the contrary, in the mountain regions of the West there is scarcely a square mile of habitable territory that cannot be reached with transmitted supplies of electricity, so abundantly and cheaply generated that it can be used with the greatest freedom for all public and domestic purposes. The annual deposit of snow, made certain in quantity by the regularity of the moisture-laden trade winds in falling, after melting, gradually as the season advances from the great heights of the various mountain ranges to the ocean level, creates an amount of power so great that it is simply inconceivable, and nature has so shaped the banks of the mountain streams that sites for dams, with material for their construction, can be found on almost every mile of their length. When, by that process of mental evolution which seemingly demands a certain and fixed period of time for the incubation of an idea, the attention of capital is attracted to the facilities thus offered for profitable investment, and the public starts sheep-like on the stampede westward to enjoy the great bounties of nature, it will be a serious question as to the effect upon the Eastern States and their established industries. What will become of the coal mines and the capital so invested? Will the transportation companies be compelled to endure a reduction of traffic? Will those making stoves and furnaces, steam radiators and other accessories of heat by combustion, cease to sell? Will the factories dependent upon steam power be able to face the competition of falling water, and will they be compelled, together with their operatives, to move westward to secure like advantages? Such questions will soon be pregnant with interest, and the problem must be settled by a re-adjustment which will mean much that is good to one section and of possible disadvantage to the other.

Whether the Western section will become the recipient merely of the natural overflow of the East, or, by reason of its assumed superiority of advantages, gradually absorb the entire vitality of its rival, is at present merely conjectural, but it seems reasonable in the light of present successful development that with certain obstacles removed the mountain region has before it a season of extraordinary advancement and material prosperity.

Owing to the prevailing unfamiliarity in many quarters with the localities in the West it might be appropriate to point out representative sections in order to afford a plainer illustration of the facts hereinbefore stated, instancing as a mining region the territory within a radius of fifty miles around the city of Helena, Montana, where gold in every possible character of deposit is shown by thousands of miles and prospects, and where silver, copper and lead, only in lesser degree, are a feature of the formation. The city known far and wide for the substantial character of its construction, the beauty of its location and wealth of its inhabitants, stands at the head of a valley of surpassing fertility, with ample supplies for irrigation. Along the Mis-

souri River, twelve miles distant (here a rapid mountain stream), is water capable of economical development equal to a hundred thousand horsepower, and measures under way contemplate the transmission of electricity to the city in such supply and at such cheap rates that motive power for propulsion of cars and manufacturing purposes, light and heat for public and household uses can be enjoyed almost as freely as the sunlight and the air.

In contemplation of the possibilities of such a country who can predict its future, when with wise laws capital can be provided for the stimulation of its resources? What a magnificent field for the settlement of the idle millions of the over-crowded East if knowledge of the inducements for emigration can be conveyed! Electricity will here find its home and its benefits be so diffused that the modest farm-house as well as the city mansion may enjoy the blessings of unlimited light, heat and power.

WHEAT IN THE FAR NORTH.

How far north wheat can be grown on this continent—that is, in Canada—is still a matter of doubt. The present limit of settlement is practically the North Saskatchewan River, or say as far as the fifty-fourth parallel of latitude. In this North Saskatchewan Country there appears to be no more climatic difficulties to contend with in growing wheat than are encountered in Manitoba, 300 miles farther south. Wheat has been successfully grown, however, 300 miles north of the North Saskatchewan, or a total of 600 miles north of the famous wheat country of Southern Manitoba. A news item has recently been published which directs attention to the fact that wheat is grown several hundred miles north of the present limit of settlement. Last week the plant for a small flour mill arrived at Edmonton, in Alberta Territory, which it is intended to take 300 miles north of Edmonton, for the purpose of establishing a mill at the Indian mission station of Fort Vermillion. The plant will be hauled in wagons across the country from Edmonton to the Athabasca River, and thence down the river to Fort Vermillion when navigation opens. Vermillion is about 350 miles north of Edmonton, and about 550 miles north of Winnipeg. It is near the fifty-ninth parallel of latitude, or in nearly the same latitude as Churchill, on Hudson Bay. There is no regular settlement in this distant northern region, and agriculture has been confined to experiments at the mission stations among the Indians or at the Indian trading posts. It is claimed that wheat has been successfully grown at some of these mission stations for years, and the fact that a flour mill is to be established at a station as far north as Vermillion indicates that the mission people have faith in the capabilities of the country. Small flour mills have previously been established at some of these mission stations north of the Saskatchewan, and the Indians are being taught to cultivate the soil; but this is the most northerly mill yet undertaken. If wheat can be successfully grown as far north as Vermillion, the wheat area of Western Canada will be shown to be even vaster than has been calculated upon in the past.

—Winnipeg Commercial.

THE CŒUR D'ALENES IN MARCH.—One of the prettiest sights in the Cœur d' Alenes is the view up Alder Gulch at present from the lower end of town. The mountain rises gently to a considerable height, and is one vast sheet of white. The undergrowth is entirely covered up and portions of the forests that loom up above the dazzling snow are beautifully crystallized with frost. The blue sky above and beyond makes a very striking contrast. Never before, says the oldest inhabitant, has the snow fallen so deep on Alder Mountain.—*Murray (Idaho) Sun.*

AN ADVENTURE WITH COUGARS.

By C. A. Gwinn.

I have been on many hunting trips into the wilds of the Cœur d'Alene and Cascade mountains, but it never has been my fortune, good or bad—accordingly as the reader may or may not be possessed of those hunter instincts that cause him to thrill with pleasure with the mere mention of a hunt for big game—to meet with an adventure so exciting as one that befell me while prospecting for a quarter-section of Government land in Western Washington in the summer of '82.

There were four of us: Billy Lang, a sturdy youth of twenty, whose physical manhood was a compliment to his mother State; Reuben Lang, his uncle, and in fact, uncle by courtesy to the whole party, though but ten years the senior of the rest of us; Dany Morse, and myself. Dany and I had but recently attained that period so ardently looked forward to by the average frontier youth, when the local land office stands ready to confer upon him the dignity of "home-steader."

Many stories of the wonderful fertility of Washington Territory and the opportunities for settlers had reached our home in Southern Oregon, and inflamed us with a desire to try our fortunes in the Puget Sound Country. This resolution, however, was not formed without innumerable conferences. Many spring and summer evenings were spent in discussing the project. Boy-like, the greater part of the planning by the younger members of the party (and that was a three-fourths majority) was concerning guns, cartridge belts, revolvers, etc.; for we thought equally as much of the fun we would have hunting as we did of the advantages of securing a quarter-section of Government land, which was the ostensible object of the trip. In spite of the superstition that long-talked-of plans are never realized, we so far realized our expectations as to effect a start in September that accorded nearly enough with our plans to put us all in high spirits. In addition to a good driving-team, we took with us a saddle-horse for emergencies. The wagon was provided with the regulation bows and canvas cover, besides which we had a small tent. The provisions consisted of a liberal supply of the camper's three staples—flour, bacon and coffee. We had a magazine rifle apiece, and a shotgun for birds.

Our journey of 400 miles through Oregon and Southern Washington was pleasant enough, though we encountered a rain storm that lasted five days. Our course lay through a country abounding in small game for the most part. Grouse, prairie chicken, ducks, etc., became a regular feature of our diet. Occasionally we caught sight of a deer or antelope, but did not succeed in killing any, though the coyotes were not so fortunate in escaping our bullets. These amusements not only kept us supplied with fresh meat, but prevented our suffering from the monotony of the trip.

On the fifteenth day out we crossed the Columbia River and were in what had been to us for many months the land of promise—Washington Territory. From the river to Puget Sound we passed through some of the most dense and astonishingly immense forests we had ever seen.

Upon arriving at Tacoma, then rather an insignificant village compared with the business metropolis it is to-day, we pitched our tent and

remained for several days gathering what information we could concerning the country. After weighing the abundance of contradicting information we received we decided to start for what was known as the "Big Muck Country," a section of country lying southeast from Tacoma at the foot of the majestic Mount Tacoma on the south and east. The country was correctly described to us as being wonderfully fertile. Though generally wooded, it was interspersed with bits of prairie bottoms called "beaver-dam land," and in fact many of these little clearings were the results of these industrious little animals, though the name came to be applied rather indiscriminately to all small tracts of prairie bottom land in that vicinity.

We accordingly set out next morning. That night we camped beside a little old weather-beaten log cabin. After supper, as we were sitting around the embers of our camp fire enjoying our pipes, the lone occupant of the lonely cabin strolled out with a—

"Howdy, gents."

"Good evening," said Uncle Reuben; "are you the proprietor here?"

"Reckon that are lays twixt me and Uncle Sam, though if there's any virtue in squattin', I calculate I oughter have some rights here, for I've been workin' at it for nine year."

"Yes? Well, we are looking for land; as you are an old-timer here, I expect you can give us some pointers; eh?"

And he did. By a diligent catechising, in which we all took a hand, we got a very satisfactory idea of the nature of the land in that section and a general idea of the locations that would best suit us. In fact the typography of the country, the roads, trails and deer paths for a radius of ten or fifteen miles seemed to be as familiar to this old mountaineer as the pages of Mother Goose are to the average youngster.

We sat talking around the fire until long past our usual bed-time, becoming more and more favorably impressed with our visitor, in the end resulting in our engaging the services of our new acquaintance, for a small consideration, to accompany us in the capacity of guide.

The name of our new comrade, we learned, was Eph Bly, and he proved to be a really remarkable individual. In appearance, he was below the average height, lean and wrinkly and with shoulders slightly stooping. His hair and stubby beard were grizzled, betokening advanced age that his vigorous activity belied. Contrary to the general rule, time seemed to have sharpened his faculties. It is doubtful if it would ever have occurred to the most deferential to give him the light end of a load, the most comfortable seat and like attentions due persons of his age. Nor would he have received any such mistaken benevolences kindly. He thoroughly impressed you with the belief that he was abundantly able to take care of himself. In fact he possessed an endurance, an immunity from fatigue, that put to blush the younger members of the party. Of woodcraft he was master, and seemed to be able to tell the exact spots in that immense forest where deer could be found at a given time of day, and the haunts of the bear, of which there were a great many, were revealed to him by instinct. His knowledge of the habits of all the wild animals of that part of the country was such that he knew as well when to look for them in unfamiliar territory as on his own hunting ground. But there is not space to mention half his eccentricities or accomplishments.

Our progress was slow. The roads were bad beyond comparison, causing us several breakdowns. Then we camped beside a small stream for three days to hunt. We had good success, killing five deer, the heads of which were scientifically "jerked" by Eph. We also got our bear, which fell a victim to Eph's old Sharp's needle gun.

It was on the eighth day that we were surprised to find nestled in an alcove at the foot of the mountain a log cabin and stable with chickens and two or three cows in sight, making a completely domestic scene that was strangely at variance with the surroundings. Eph told us that the lonely rancher was a Norwegian, and managed to eke out a living from his chickens, cows and a couple of patches of beaver-dam meadow, and by trapping in the winter time.

Here occurred the adventure that I set out to relate. The Norwegian told us of his attempt to raise a field of rye on one of his meadow plots a half-mile up the canyon from our camp, but said the deer had eaten nearly all the heads off. After supper I proposed that we all go up to the rye patch and watch for deer. We had had a tiresome day lifting the wagon out of chuck-holes and only Billy volunteered to go with me.

Eph said, "If my rheumatiz wasn't givin' me



Hall Columbia I'd go along, for you will stand a danged good show to run onter some game."

About dark, Billy and I set out, after getting more explicit directions from the Norwegian. The moon had risen, but only lighted our trail in desultory streaks and patches. More than a hundred feet above our heads the top branches of the mighty forest were overlapped and interlaced, casting perpetual black shadows that even under the influence of a noonday sun was little better than twilight. The sensation to one traveling through those gigantic forests is not unlike that of walking through underground passages. The intense silence, the sublime immensity of the forest would have awed us to whisper had there been no occasion for keeping silence.

When we sighted the rye field we found it to be the a small bottom, perhaps six acres, oval shaped and surrounded by mountains. To approach without exposing ourselves to view from the rye field we found was rather difficult, as the trail descended toward one patch with but little timber to screen us. The last hundred yards we made on our hands and knees.

The miniature farm was enclosed with a fence of two rails or poles wired to trees, stumps, brush and occasionally to posts. We crawled under the fence and paused to listen. All was silent as a Presbyterian Sabbath. Cautiously we were advancing into the rye when our ears caught the sound of a slight rustling in the tall grain. Yes, there was the snip, snip, at the heads of the rye, and an occasional stepping.

My heart rose in my throat and I felt that smothering excitement that I think all hunters have experienced at some time or another. "If there's more than one, you take the one on your side. Ready?"

"Ready."

We rose cautiously to our feet. Not fifty yards distant stood a big buck and a doe. Neither was yet aware of our presence, but just as we were taking aim the buck gave that peculiar signal, between a snort and a whistle, that told us we had been scented.

At the crack of our rifle the buck reared and came down on his knees, but was up and off again instantly. I had broken one of his fore legs and the doe soon distanced him and was gone. Two or three more also ran from the other end of the field. Billy and I stood there and peppered away at the buck as fast as we could work the levers of our magazine guns. He ran to the fence and tried to jump it and fell back. A second time he tried it, struggled desperately on the top, succeeded in falling on the outside and escaped, all the time under fire from our Winchesters, but without further injury.

In the middle of the field there was a cluster of stumps and brush. We had walked toward this as we stopped firing, sticking in a few cartridges as we went. When within ten steps a deer bounded out in front of us and broke for the timber. There we stood, with our guns in our hands, in open-mouthed astonishment and gaped after it till it had leaped the fence and disappeared. Then we realized what had happened—we had had the "buck ague."

We stood looking foolishly at each other till

Billy broke the silence. "Well, we're two pretty—"

"Great Scott! what was that?"

From up the mountain side, in the direction taken by the deer, there came an unearthly blood-curdling scream, or shriek, that made our hair stand on end and seemed to freeze our very vitals. By the moonlight I could see that Billy was ashy pale and knew that he was no less terror stricken than I was. While in this agitated state of mind we were startled by a voice close behind us.

"Cougar!"

It was the Norwegian. He had heard our rapid firing and came out to learn the result. At his heels were two hounds. One was of the old Virginia fox-hound breed. The other was a mixture whose name, Spot, described his color.

We could hear growls from the cougar—hellish, triumphant growls, such as a dog utters when burying his fangs in the throat of an unfortunate cat, only intensified a hundred-fold. We also heard a strangled, pitiful bleat that told the story of the wounded buck's fate.

The dogs had no sooner arrived than they struck the trail of the wounded buck and set off at full cry. Their owner tried his utmost to call

and, in his long mountain experience, should have become familiar with each voice of the forest and inured to their terrors.

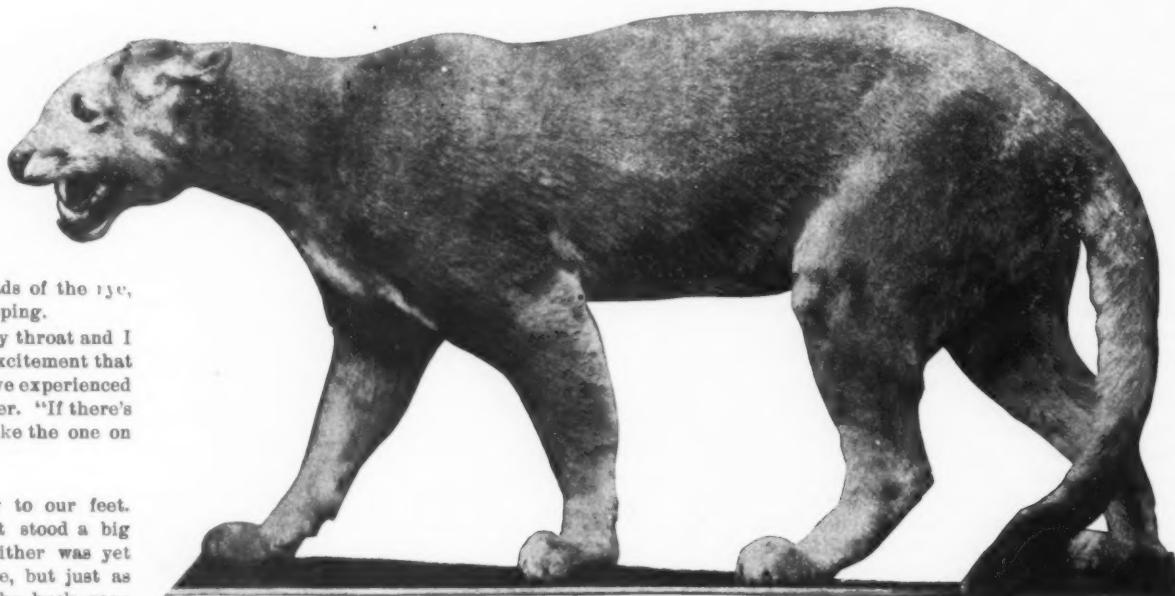
When the cries and barking had ceased, we started for camp. The Norwegian was very uneasy concerning the fate of his hounds, for the dogs were as necessary to him as his horses. He called, and whistled shrilly through his fingers—

"But there came no other answer than the answer of his crying."

Shortly after parting company with the Norwegian, we met the boys from camp. They had heard our rifle fusilade and the hellabaloo that followed and had become alarmed for us.

Eph "lowed the boys wus hevin' a bit of a scrimmage with one o' them cougar devils." But the way he grabbed his old rifle and was off, at a rate that, in spite of his rheumatism, kept the other two busy to keep up, convinced them Eph thought it something far more serious than a "bit of scrimmage." By the time they met us they were thoroughly frightened and shook hands with us as though we had passed through some great peril from which they hardly hoped to see us escape.

Eph explained his fears in his slow, peculiar



A COUGAR, OR MOUNTAIN LION.

them back, but without effect. It was not ten minutes after they left till their wild yelps and angry screams told us that they had engaged the cougar, perhaps the most formidable antagonist that roams the forests of North America. I hope I may never again hear such sounds. The screams and snarls of the infuriated cougar, interrupted in the moment of his triumph, re-echoing upon that lonely mountain side, gruesomely wild even by day, were more horrible than words could describe. It was the voice of a demon; ten thousand furies; fiends incarnate; a fitting accompaniment to Dante's "Inferno." I know nothing that will furnish a comparison; the growls and cries of two infuriated tomcats engaged in a fight to the death is the nearest approach. It was weird and uncanny, appalling, blood-curdling, and an unreasoning and ungovernable terror took possession of us.

Though perhaps a half-mile from the scene of the fight, perfectly secure from personal injury, we were scared to death. My knees knocked together and my teeth chattered as with cold. Nor was the Norwegian much less terrified than Billy and I, though he afterward showed us the hides of seven cougars that he had killed,

fashion: "Thinks I, them young chaps hev shot a mowich (Chinook for deer) that some sneakin' cougar has spotted for his own dinner and mebby was jist ready to spring onter, and the dirty critter was takin' his revenge outer the boys."

"How'd you know what it was?" asked Billy.

"Hump! Haint I heard them screechers for many a year, and silenced many a one of 'em, too?"

We talked it over after we got to camp, and Eph proposed that we take a little "jant" in the morning in the direction of the fracas and see what we could see.

After our breakfast of flap-jacks, venison steak and black coffee, we accordingly set out. We first visited the Norwegian's cabin, where we learned that the fox-hound had come home during the night. One side of his head was badly bruised and the big, flapping ear was slit from base to tip. Spot was given up for dead by his master, who joined our party with a hope of wreaking a vengeance upon Spot's destroyer. The fox-hound accompanied us, leading us over the wounded buck's trail. He just suited our purpose. He was too sore to run, but walked

soberly along a rod or two ahead, whining anxiously as we proceeded, and occasionally uttering a sharp cry of pain as his sore ear came in contact with the brush.

A half-hour's walk brought us to the battleground of the night before. If we had not seen ample evidence of it, the actions of the dog would have indicated it plainly enough. With apprehensive whines he cowered at the feet of his master, as if seeking protection.

In the soft earth was written the story of the struggle. Beneath a gnarled and leaning sapling from which the cougar had evidently leaped upon his prey, the ground was trampled and torn up, and upon the dry leaves were the dark, dried stains of blood. But no remnant of the deer remained, nor was there any sign of the presence of Spot, dead or alive.

The carcass of the buck had been dragged off, leaving a plainly defined trail, which we started upon after a few minutes' survey of the scene of the struggle. The trail led north along the side of the mountain. After pushing along in silence for some twenty minutes, we discovered that it entered the head of a deep, rocky gulch. At the head of the gulch was a dense thicket which the trail entered and after a careful reconnoiter found that it did not emerge at the other side. It was evident that the cougar was in the thicket enjoying the luxury of a nap upon a full stomach.

Taking a wide circle to avoid alarming our game, we surrounded the thicket, the Norwegian entering the gulch with the hound some distance below. Cautiously we approached, the circle gradually contracting around our dangerous quarry.

When all were ready, Eph signalled the Norwegian in the gulch. He advanced to within a hundred feet of the edge of the thicket and urged the hound forward. The dog ran into the thick brush, making the woods ring with his loud bayings. Then came an answering growl from the interior and then a mighty rush and the hound shot out of the thicket, and with his tail between his legs went tearing down the gulch and disappeared. At his heels was the cougar, but when it reached the edge of the thicket stopped short at sight of the Norwegian and stood lashing its tail from side to side, showing a ferocious looking set of teeth and growling in a minor key the while. But if meditating an attack it was saved the trouble of arriving at a conclusion. Simultaneously came the reports of Eph's and the Norwegian's rifles, sounding to us almost as one shot. At the report the cougar dropped in his tracks, with two bullets in his head. The big balls and the short range proved effectual, and, save a few spasmodic kicks, he never moved again.

But there was a surprise in store for us. At the crack of the rifles we, who had been stationed several rods back from the gulch, started to run toward the thicket with our guns at a ready, when out bounded another cougar from the thicket. It came out of the side of the thicket opposite to where the firing had been, evidently with the intention of escaping. It came right toward us. Through surprise we lost the best chance for an effective shot as it hesitated an instant on the bank of the gulch. Next moment it made a rush past us, and it immediately became the target for three rifles. At the second round it fell, rolling, snapping and snarling, over and over. But before we could dispatch it with a carefully aimed shot it was up and off again, though its progress was slow and, from its growling, evidently painful. We gave chase, stopping occasionally to shoot. Time and again we hit it without producing a fatal wound, the only visible effect being to slacken its speed. Apparently it was not gaining much on us, and becoming frantic with pain turned at bay,

crouched to spring—and rolled over dead, shot through the head.

It was the most exciting quarter of an hour that I ever experienced, and I think we all managed to work a good deal of our feelings into the yell of exultation we gave when the second cougar rolled over dead. The first one killed was a royal specimen of the kind, and both Eph and the Norwegian said it was the largest either had ever seen. The second was a female not more than two-thirds as large as the first.

It was decided that the skin of the big one belonged to Eph and the Norwegian, but they soon agreed to dissolve partnership by Eph paying the Norwegian five dollars for the skin. Eph then proceeded with much care and skill to remove the hide in its entirety, with the intention of either having it mounted himself or disposing of it to some taxidermist. The hide of the smaller one fell to our party.

When we returned to the Norwegian's cabin, within two hours of sundown, old Spot had dragged his sore body home. He was covered with blood, which had dried and stuck the hair together in little bunches, and altogether presenting a very woe-begone appearance. He carried at least a dozen wounds from the claws of the cougar and was so swollen and stiff that he could hardly move. His wounds, however, were not of a fatal nature.

In conclusion I will say that each of my three companions now own valuable tracts of "beaver-dam" land in the Big Muck Country, while I—well, I am a living demonstration of their usefulness of the old adage concerning the rolling stone.

CAMAS ROOT.

"Do you know what camas root is?" asked a real estate man yesterday. "You have heard of Camas Prairie? Well, the camas very much resembles an onion. It is a food of which the

Indians are very fond, and is succulent and nourishing withal. It is bulbous in shape, and is easily dug out of the ground, and when cooked is very palatable. The Indians cook it this way: A pit is dug in the earth and filled with wood and bark, and then on top of this big stones are placed and fire applied. As the wood burns the stones drop to the bottom of the pit, red-hot. Then the camas is placed in the pit, often as many as fifteen or twenty bushels at a time, and the pit is again covered over, and the bulbs given plenty of time to bake. Then the receptacle is uncovered, and a royal feast follows."—*Fairhaven Herald*.

INDIAN SEAL HUNTERS.

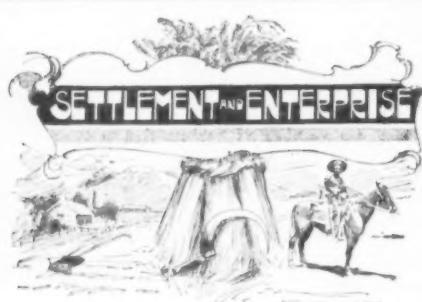
The Neah Bay Indians have laid up their sealing schooners and will go hunting in their canoes, as in the olden times, says a Washington exchange. This has been brought about by the recent regulations agreed upon by this country and England. They will make their headquarters at Ozette, a small village sheltered by Flattery Rocks. Sealing in a frail canoe forty miles from land seems a very dangerous undertaking, but so accustomed has the Indian become to taking his chances with the old Pacific that he no longer thinks of the risk. Before leaving shore he is sure there will be a spell of good weather, and when on the deep he studies the heavens faithfully for any sign of an approaching storm. Long before one breaks he is well on his way home. Mr. Indian is not easily chased in, however; something more than an ordinary blow is required, for he is prepared to weather all storms of small caliber. In fact, a little wind and sea improves his chances very materially for catching the seal. On days when the weather is smooth the seal is very easily awakened, thus making it difficult to get within distance. Seals are now very plentiful off the cape. So far the Indian fleet has taken 2,203.



MOUNT TACOMA.

An actor of wierd power and grace art thou.
In what roll can I say I love thee best?
When like a surprised priest who late confessed
The dying, thou dost stand with pensive brow
In solemn contemplation? Or, anon,
When like a new-made bride, rosy and bright,
And warm with blushes dimpling in the light
Of sunrise? Or, all sorrowful and wan,
In the blue pallor of a wintry day,
Like a sad spirit in its winding sheet?
Nay, none of these doth please my fancy well
As when at night I see thee stern and grey,
The Sentry of the Sound, at midnight spell,
Guarding the sleeping treasure at thy feet.
Tacoma, Wash.

CARRIE SHAW-RICE.



The Sunnyside Country, Washington.

Charles E. Nixon, of the editorial staff of the *Chicago Inter Ocean*, writes as follows concerning his recent visit to the Sunnyside Country:

The soil of the Sunnyside district is practically inexhaustible in its fertility. It is not a river bottom, like the land on the Indian reservation through which the railroad runs between Prosser and Union Gap, but bench land, which has never been washed, the accumulated sediment of ages, consisting of decomposed volcanic rock, phosphates, and fine detritus, the easiest soil to cultivate in the world. It does not bake in the sun, nor does it become soggy in water. It is free from alkali and burnishes the tools that work it. In places where its depth is exposed for considerable distance, as at Zillah, where the river has cut down its bank, the soil is eighty feet deep, and wherever wells have been sunk the soil has been found to be from sixty to 100 feet in depth. The extraordinary depth of this soil would seem to be a sufficient assurance of its permanent fertility. But in addition to this the experience of more than twenty years' continuous cultivation shows that it has an enduring and even an increasing productivity.

Down there fine benches of land, with the chain of mountains like skyward sentinels environing this garden land, one passes a panorama of invigorating fertility. Hop yards laid out with the precision of chess boards, with foliage tropical in luxuriance, with leafy bowers and cool, inviting vistas. Hops require a larger investment than any other crop. To get a yard fully equipped and cultivated up to the end of the second year, when it will bear a full crop, it is estimated will cost nearly \$200 per acre, including cost of land. Once started, the expense of operating is light. The cost of production is 8 cents a pound. The average price for twenty years (excepting 1892, when it ran up to \$1) has been 19 cents, and the average yield one ton to the acre (twice that of New York).

During the harvest just closed the price at North Yakima was 17 to 20 cents, giving a profit of \$180 to \$250 per acre, while many fields report a yield of a ton and a quarter, and one field has as high as 3,000 pounds per acre. There are many advantages in growing hops by irrigation beyond the security against losses from lice and the cost of spraying. The growth can be regulated by command of the water, so that the hops on a large ranch may be harvested at the proper time, when they are just ripe. There is one hop farm of 600 acres in the Sunnyside district, the largest in the world.

The hop gardens are not the only attraction of this water-girt valley, for there are beautiful regular fields of alfalfa, inviting as if carpeted with soft green velvet. This rich and curious clover is prolific in its yield. With an irrigation after each cutting a crop from one and a half to three tons per acre can be harvested every

six weeks during the summer. The usual product, one season with another, is about eight tons per acre. As a stock food alfalfa is excellent and much superior to every other hay for milch cows and for fattening beefeves, and especially valuable for hogs, and always finds a ready market. It is a good crop to start with, for it may be cut twice the same season. The cost of seeding alfalfa is small, being but \$5 per acre for seed and labor of sowing after the ground has been prepared for the crop. The work of irrigation is also light and the mat of roots prevents the soil from washing.

In the dry climate of Sunnyside barns are not required for shelter, so the alfalfa cures as stacked in the open air, and grain knows no rust nor blight nor mildew. The production of honey is another industry which may be profitably sustained in connection with the growth of alfalfa. This, like other kinds of clover, is attractive to bees, and some hives in the valley have yielded as much as 250 pounds of choice honey in a single season.

The great canal, gleaming like a silver girdle in the sunshine, is the safety line between savagery and civilization. Above it on the foothills is the dry, useless growth of gray-green sage brush. Below it the reclaimed desert blooms like a fair garden. With due regard for the pleasurable impressions created by the hop gardens, the fields of grain and refreshing alfalfa there is something delightful in passing through irrigated orchards with branches now bowed in the fragrant magnificence of full bloom. The Yakima Valley is notably free from fruit pests, and all the fruits of America, except the citrus, flourish. Apples, peaches, pears, plums, prunes, cherries, apricots, grapes, berries of all kinds and melons have been successfully raised for many years. These fruits in quality and flavor are superior to those of California, the rule seeming to be that the farther north such fruits will grow the finer their flavor. They have a more solid texture, also, which is a great advantage in packing and shipping, enabling them to reach distant markets. The tree or bush maintains a healthy growth and all varieties produce abundantly. The experimental period was passed several years ago, and it only remains for the farmer to select the kinds of fruit and the different varieties he wishes to raise for the home or market. There are no fruit crop failures, a trouble prevalent in the Eastern States. As there is a large market for fruit through all the surrounding country, the number of orchards is rapidly increasing in the Sunnyside district.

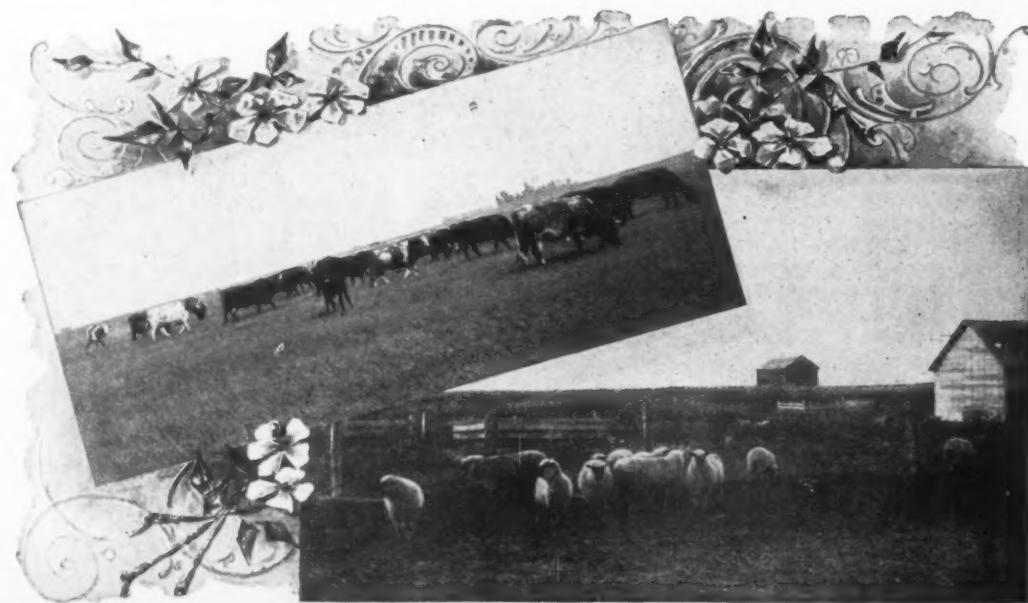
A Woman in the West.

A rancher's wife writes to the *Farmer's Voice*, Chicago, as follows:

Some weeks ago I met in the Yakima Valley, Washington, Mr. David Ward Wood, the editor of *The Farmer's Voice*. It seemed like meeting an old friend to meet the man who directs the editorial department of our highly esteemed *Farmer's Voice*, the staunch friend of the people. He asked me to write a word to my sisters to tell them of my experience in this garden spot of the world. Three years, adverse, came to my husband while we were living in Northern Illinois. It was the old trouble, a mortgage that could not be met. We were closed out by the sheriff. Gathering together what we could, we started for Washington and arrived in the Yakima Valley, near North Yakima, with less than \$500. My husband purchased 10 acres of this fruit and hop land. Land can be had here without any payment down. We at once began the building of a house and to clear our land of sage brush. We put three acres into fruit, pears, peaches, plums and apricots, five acres in hops and two acres in alfalfa, from which we maintain a prosperous little dairy. Last year we did 100 per cent better than we ever did upon a quarter-section in Illinois, and this year we shall do much better. Our health is much better than it was in Illinois, the society is good, there are good schools and no one need feel homesick for the want of any feature of civilization. As might naturally be expected, a woman's work on 10 acres is much lighter than it must be on 160 acres. Compared with my former work, my life now seems like a daily picnic. It is the country for farmers' wives and for farmers themselves. We need lose no sleep anxiously waiting for rain to make the crops grow. We irrigate and make it "rain" when ever we like. We are not worried almost to death at harvest time for fear it will rain and ruin our hops, for we know that we shall have dry weather for harvesting. There is plenty of land here, sisters, and it is good anywhere in the Yakima Valley. Stir up those husbands of yours, get out of the old East, and have them come into this garden that abounds in health and wealth.

A Visit to Lewiston, Idaho.

"I am going to show you scenery that is worth a trip across the continent to see," said E. V. Smalley, as when, after leaving the car at Uniontown for this place in carriages sent by the citizens here to meet us, we approached the banks of the Snake where it forms its junction with the Clearwater. Our appetites for scenery had been



A PEEP AT SOME NORTH DAKOTA MONEY EARNS.

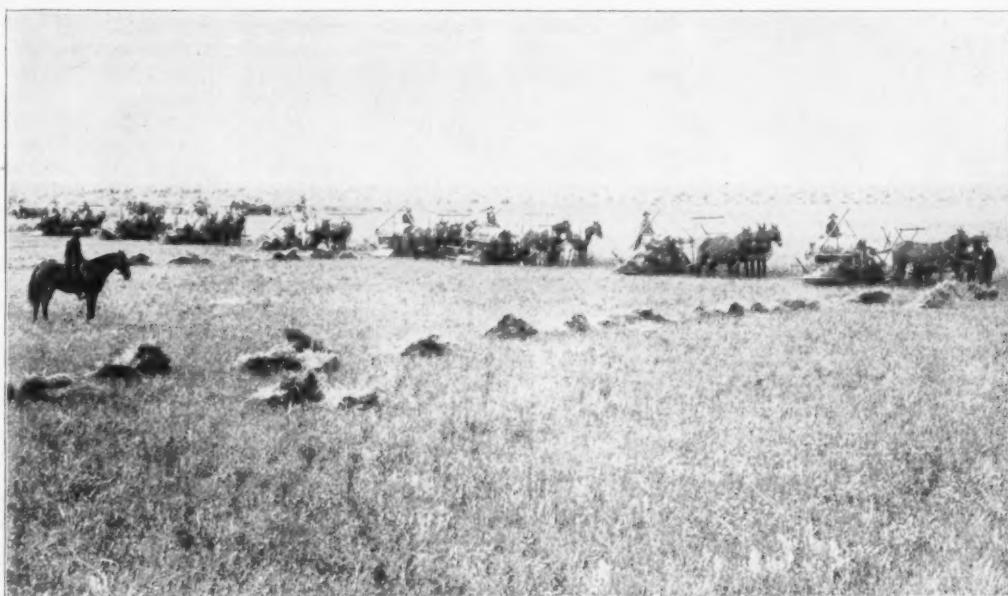
somewhat palled by surfeit of it which we had for several days, and his remark elicited little interest. But when a turn in the road brought us to the brow of the mountainous hills which line the north bank of the river, we looked out on a scene which called out rapturous remarks from the entire party. Words cannot describe its beauty, and the photographs taken by the local artist are but pale and inefficient representatives of the actual. Below us, down the sides of the hill, 2,000 feet below, looking like silver ribbons, were the Clearwater coming from the east and the Snake from the south, with Lewiston, five miles away, looking like a toy village clustered about their junction. Away to the left were the Craig Mountains circling to the south and west with timber to their tops. Beyond them, forty miles away, and south of the gorge where the Snake breaks the range, are the Alpowa Mountains, ranging westward, where they meet the Blue Mountains, which bear away west, their snow tops glistening in the afternoon sun, to send their melting snows down into the fertile valley of the Walla Walla. Between the rivers and the mountains the benches, covered with green grass, rose step by step until they rested against the sides of the mountains. The green carpet was striped with the shadows thrown by the declining sun on the western banks of the gullies which cut the benches in all directions. * * *

The uplands of the Palouse need no irrigation, the rainfall being sufficient. Here in the valley and to the south on the benches, crops are raised without irrigation, but with water the yield would be greatly increased. We were driven twenty miles over these benches, great undulating stretches covered with green fields of the native grasses, and fed on by the droves of cattle looking sleek and fat. A grass called alfilarilla has come in from Mexico and furnishes a luxuriant and succulent forage plant. Its seed is contained in a sharp, thorn-like pod which, under moisture, twists itself into a spiral and, rotating, bores its way into the ground, illustrating another of the wonderful provisions of nature for perpetuating the species.

Away to the south, around the base of the Craig Mountains and south of them, lies another great prairie, the Camas, as fertile as this, now given to raising cattle because of the long haul making grain-raising too costly. We met a trainload of their cattle on the way here looking as fat as if stall-fed. Land in the Palouse is held from \$30 to \$50 an acre; in the valley proper it is held from \$100 to \$200 an acre because of the fruit capacity, while on the benches it runs from \$12 to \$15, if unirrigated. The possibilities of this region are unexcelled anywhere. I am not an optimist, generally; was an indurate bear during the grand land boom of the West, but it is my sober judgment that there are opportunities here in farming and fruit culture which no country I have seen equals.—*P. J. Smalley in St. Paul Globe.*

College Men as Ranchers.

The old question as to what should be done with the young men graduated from the colleges and universities for whom the over-crowded professions have no attraction is answered by hundreds of them who have become ranchers in the West, from the Missouri to the Pacific. There are several of the type in the Yakima Country, and a conspicuous example is Dr. J. G. Van Marter, of Prosser, who is best known from his connection with the irrigation company there. Dr. Van Marter is an American, born in Italy, and from



HARVESTERS AND BINDERS AMONG THE GOLDEN GRAIN IN THE RED RIVER VALLEY.

his European experience has come to look upon agriculture as the choicest of all occupations for the man of wealth and education, as well as for the man of moderate means. He saw in Europe that agriculture is held in the esteem that George Washington paraphrased as the "noblest employment of man." He cares little for the practice of the profession that he was educated for. Indeed, several of the physicians of Yakima are prosperous ranchers. The country is so healthful that fruit and alfalfa bring much greater rewards to the work of their brains and hands. Down in the Palouse Country Dr. Van Marter has an 800-acre ranch, of which about half has been put under the plow, and the whole is covered by a seven-mile irrigation ditch. He now has in fruit about forty acres, forty in alfalfa and twenty in hops. He plans to engage in pig pork production to a considerable extent, and in addition to the alfalfa pasture for the hogs will plant about twenty acres in Jerusalem artichokes, a large field of corn and wheat, and probably a tract in field peas. It is only good business sense to see that there is money in the intelligent production of pork to take the place of the importation of the almost endless train loads of pig products that are now brought into the Northwest from the Mississippi and Missouri river valleys. —*The Ranch.*

Settling in the Northwest.

The classes of settlers who succeed and seem best fitted for the Northwest are the poor man or the man with a moderate amount of means. Alberta, with its ranches, and some of the districts, such as Edmonton, with opportunities for farms on a large scale, furnish openings for the successful use of larger capital; but men who themselves work the land are what the country chiefly requires, and to them it will prove most satisfactory. The advantage certainly lies with emigrants who have had some previous practical acquaintance with the farming conditions of the Canadian climate, or of a climate similar to it. They begin at once to make crops grow, which the unskilled emigrant rarely does. Settlers from Scotland easily adapt themselves to the conditions of the country. The English and Irish farm hand has less flexibility for change, but he, too, succeeds by dint of pluck and industry. The experience of the Northwest shows that extraordinary care is required to make a success of assisted emigration. Many of the men who appear to have been discontented, if not idle, when

receiving aid, have become comparatively successful when thrown entirely upon their own resources and compelled to work their own way.—*World Travel.*

Chance for Farmers.

There are 2,000,000 acres of surveyed Government land in this land district and as many more acres of unsurveyed, awaiting settlers. A large portion of this land is splendid agricultural land and should be speedily settled up. Settlers will find it most productive and they will find a ready market for all they raise. Why cannot it be settled by the idle men of the cities? Is there not something that can be done by the people here to bring in large numbers of settlers? Why not co-operate with the railroads which have lands and begin a systematic campaign to induce settlers to come this way? These lands are the equal of those in Oklahoma, they will pay the owner better if properly cultivated, and they can be reached without hardship. It will cost little to build cosy homes in this section and will cost little to live. The land will produce oats, vegetables of all kinds, the greatest grass crops in the country, it will be especially good for celery, potatoes, cabbage and such products, and it is good for stock-raising.—*Duluth News Tribune.*

A Word to Prospectors.

If you go prospecting this summer, writes a correspondent to the *Helena Herald*,—and it seems quite likely to be the occupation of a good many men—give the numerous dry gulches which abound in these mountains an examination. It is the theory of the man at whose suggestion this is written that the dry gulches are as likely to contain pay gravel as the living streams. At any rate the matter is worth looking into, and if you strike pay and cannot work the ground yourself for lack of water, you can find some one with means who will take it off your hands at a remunerative figure; there is no doubt about that.

The Most Independent Man.

The most independent man in the West to-day is the man with the fifty-acre irrigated farm. He is a prince. He raises everything he wants and always has something to sell that brings money. As he looks out on the world from the shadow of his own peach tree he experiences a feeling of serenity that is most satisfactory; and as the shadows of life's evening settle down, he knows that he is safe.—*Prosser (Wash.) American.*

THE ASCENT OF MOUNT BAKER.

By James Peter Zerincaurt.

One of the most striking landmarks of the lower Puget Sound Country is formed by the perennially snow-crowned mountain which arches up to a height of 10,800 feet, whence it is visible for a considerable distance by land and sea. Standing within the northern portion of Washington State, thirty miles due east from Bellingham Bay, a populous vicinity on the Pacific shore line, its unique position on the confines of the border dividing the State from British Columbia gives it a celebrity distinct from that attaching to the higher mountains of the Cascade Range farther south. It is inferior in height to Mount Tacoma (or Rainier), the monarch of the same range of mountains; but although level only with the crest line of the Western Alps in altitude, history is merely forming in connection with Mount Baker.

During the titular epoch marking the advent of Captain George Vancouver on the coast about the year 1792, it derived its name from one of the officers first to observe the mountain. Up to twenty years ago no efforts with the object of scaling the vast peak had been known to have been attempted. Even the record of an ascent accomplished at that distance of time by an Englishman, named Coleman, must have lain in archives away from the reach of those people who have been populating the contiguous territory within recent years. Only a few years ago it was current talk among the people on the coast that as an incentive to the endeavor of placing the national ensign on its highest peak by some patriot mountain climber, the United States Government had a standing reward of a substantial nature. Later events which threw light on the character of the mountain proved the canard in regard to the prize to be as baseless as the recurring reports of eruptions in the extinct and snow-filled craters, and the clouds of cinderbar and molten lava streaming downwards to accumulate in vast declivities of scoria.

The residents of the adjacent cities, previous to the recent successful ascents, were under the impression that the fate of the Pompeians might be theirs, provided the phenomena which they had witnessed as a near neighbor should assume a freakish mood. Bush fires in the vicinity occasioned a renewal of reports as to activity in the volcano. The fears of the people as to the real character of one at least of the chains of volcanoes which traverse the continent were silenced through the successful ascending of the mountain three years ago by several parties from various points within the seaboard radius. Considering the scaling of Mount Blanc in 1858, when a minimum thermometer was placed on the summit that a register of the lowest winter temperature might be obtained, the ascent of Mount Baker is a dwarfed undertaking in comparison. Still, a spicce of

danger is encountered sufficient to add piquancy to the trip. The difficulties of approach to the foothills which lie at the base of the "Bride of the Pacific," as the real mountain is sentimentally termed, were much greater at the time of Coleman's ascent, two decades ago, than exist now. Incidental to climbing the 10,800 feet, which embraces the height of mountains, one encounters all the dangers and obstacles to be met in ascending to high altitudes. Experiments with a view to adding to the scientific records of temperature at high elevations by placing a thermometer on Mount Baker where it would be comparatively easy of access, would make an interesting comparison in the Western hemisphere in connection with that placed on the Alpine peak.

On the upward climb precipitous walls of rock have to be avoided or scaled by their jagged faces; great glaciers having a vari-colored sheen are carefully picked across, and mounds and nubbins of ice form silhouettes that need avoiding by making a detour. Most treacherous of all are the crevasses across which natural bridges evolve from the greater bulk of snow that remains, perpetually capping the highest portions of the mountain.

During the summer of 1891 a party including Percival J. Parris, a noted mountaineer who had a record of thirty similar experiences in hard mountaineering, ascended to the summit. A calendar of the events he had inscribed on the ice-axe which he bore with him, averred his experiences on the occasion as being the climax to all of his performances in arduous labor. At

the same period and by common tributaries of the glacial-fed Nooksack River, several expeditions sought the less congenial ozone of the mountain apex. The route usually pursued along the north fork of the river allows eighty miles of a good wagon road in setting out. A pack-pony can be secured at Sumas, the boundary city which is accessible by road and rail from either side of the line. The necessary baggage can thus be conveyed by road and trail for a considerable distance to where the last settler on the way has his holding.

It was one year after the foregoing ascents that a party from Whatcom, on Bellingham Bay, reached the summit of the mountain, discovering traces of those who had previously made the ascent. Usually journeying south by east in making the mountain, the first night on the way is passed in an *auberge* known to the travelers in that direction as Loop's. Here, while following the line of the north fork of the river and entering on a prospector's and settler's trail, the arduous portion of the journey is begun. Out on the trail, within the recesses of the conifers studding the lowlands, is situated the store of a bucolic. This dispensary of supplies for the convenience of the bush-rancher and prospector is located where its mission is of good account. Clearings are being made in the forest and the primeval giants are hewn down to make room for fruit culture. There is something more than stern nature to be met with in the by-path to the higher reaches of land.

At the Davis ranch, the Seiler of Mount Baker, the haunt of man is left behind and the adventurers go groping for an uncertain path to the summit. The guidance of the river is exchanged after a time for that of Glacier Creek, on whose bank it is customary to find a suitable camping place. Wading in the creek by turns when plodding along its banks is found unpleasant traveling, but is the only course. In this way is entered a canyon, through which the glacier-fed water runs and in which a watery path must be waded at intervals in pushing forward to favorable ground on which to continue the upward climb. On the



DOME OF MOUNT BAKER—WALL OF ICE 150 FEET THICK, GLACIER CREEK TUNNEL AT THE BASE

right, while traveling in a southerly direction in ascending the northern foothills, the trail is picked up and skirted by a vast perpendicular wall of rocks, leads to a great, rocky plateau or basin having a width of half a mile.

Far up on the face of the ledge, which is clothed with scrubby fir and cedar trees and a labyrinthine growth of berry vines and devilclubs, there is seen a cave of seventy-five feet width of opening, with arched roof. Bear tracks are very numerous in the vicinity, indicating the spot as the haunt of wild animals. At this stage of the journey, also, there falls from a height of three hundred and twenty feet, with resonant sound, a volume of water which has its inception at the base of the great North Glacier. Any description of the glacier itself would fall far short of conveying an adequate idea of its grandeur of slope and pinnacle, where it forms a brilliant foreground to the vast dome looming up in its rear. On surmounting the precipice, a rocky space, where a memento of history has been made, unexpectedly emerges on the view, 150 feet beneath. A reddish-dish-colored stream meanders into the opening, after permeating the pyrite *in situ* earth, causing it to be termed the suggestive name of Iron Creek. Another stream in the vicinity was designated as Bear Creek, owing to a bear having succumbed to a well directed shot from its bank during an ascent of the mountain. An incident which furthered topographical designations took place when a piscatorially inclined mountaineer replenished his lunch basket with trout from a sister creek which he named in honor of the fish. It is evident that Coleman did not design to give attention to typography, it having been left for his successors in ascending the mountain to designate the various streams on the most salient pretexts which occurred during the journey to the summit.

In advancing to the verge of tree life a most striking object is encountered in the form of a wall of ice having a thickness of 150 feet. At one point this crystal barrier has been pierced by the action of melting snow and ice, and through an arched tunnel thus formed comes rushing forth the water of Glacier Creek. At this altitude of about 6,000 feet are clumps of dwarfed conifers which form suitable camping places, and also serve as shelters from the keenest winds of the region. Continuing along by way of Iron Creek to a green oasis on the line of ascent, a suitable location for a permanent camp can be chosen in the shade of the scrub-growth timber. Attempts to gain the top of the mountain from this locality have been stayed by barriers of rock, no definite route having yet been marked out by which the final dash to the top can be accomplished. On the east face thus far has been experienced most difficulty in ascending, through intervening fields of ice, packed snow, and cliffs and peaks of rock. Across on the west face a short distance, where a ridge is studded with timber, a favorable opportunity is afforded of passing on to the shoulder, thence to the base of the main dome, where the steepest portion of the way is encountered. Thus far, being as high up as where the timber merges with the evidences of glacial phenomena and its growth is debarred, plump grouse have been brought down with the rifle.

In this connection, on the nation's natal day three years ago, a member of one of two parties ascending met with a fatal accident. Both parties were in view of each other when a mountain goat was espied, which was stalked by a man named Smith, who followed the animal only a short distance, trailing his rifle, when it discharged accidentally, shattering his arm, from which injury he bled to death. In passing across to the west shoulder of the mountain, the travel is over great spreads of snow and layers of ice rugged through regulation of shifting masses from the higher ground. In ascending the dome crevasses

averaging three to fifty feet in width have to be skirted, or if passed across on the snow the passage has to be conducted very carefully for fear of sinking into the abyss. On looking into those fissures, where scintillation takes place, is seen a bluish haze which seems to fill the space between the rent snow blocks of immense depth and underlying ice with a relieving softness.

In ascending, with the aid of alpenstock on the snow travel, and axe to cut out steps in the escarpments of ice which form declivities on the slope, deposits of volcanic ashes are scrambled over, being left behind only to enter on less comfortable stretches of rock. Towards the summit the ice-axe is in constant requisition, having to be plied owing to the angle of ascent, which is registered by the clinometer at from forty to eighty degrees. The latest expedition on the mountain in 1892, following up the search for a higher altitude and relics of former expeditions, passed over the crest of the mountain to the east, where the still unexplored east dome looms up 100 feet higher than any yet attained. On the highest point at that time there was found a flag-staff which had been planted on the occasion of a former ascent. To the east, beneath where it forms a break in the snow, is visible at the depth of 1,000 feet the circular mouth of a crater. From the vantage ground gained are seen vistas of scenery comprising a great sweep of mountainous and undulating country. Out on the archipelagic waters which mingle with the ocean through which flows the life-giving Japan current is a studding of isles and islets, the emerald surfaces of which appear like so many large South Pacific lilies in a great pond or lake. An expanse of land and sea, of valleys and highlands, varied in beauty in its vast aspect, forms such a panorama as will not easily escape from the mind. The greatest triumph in ascending the mountain is gained in the view of scenery which ranges over the Puget Sound Country and is diversified in a way common to the region.

In descending, attached to one another by a rope as is usual, the danger is hardly reduced to any great extent in comparison with that encountered in the upward climb. On the downward path a misstep might prove the second stage in building up a series of tragedies, and the inception of cairn or stone mound building; or the advent of crosses and iconism on the mountain side. Less advanced notions memorize those fatal incidents in a practical manner, but the realistic dangers encountered do not point to the mountain as the scene of untoward events. Careful stepping on the ice and deep plunging of the alpenstock in the snow, with the varying experience of glissading over the volcanic ashes and crumbled rock, lands the mountaineer safely at the foot of the great dome, where the most trying part of the return journey is at an end. As to the surroundings of the mountain little information is available, but the district is presumed to be rich in coal and minerals which will become more easy of access in the construction of roads now projected being carried out. Seen from any place allowing the advantage of a good view, even a stoic would become impressed with the grand massive landmark of the North Puget Sound. It stands head and shoulders above all other mountains in the northwestern portion of Washington State, alongside of the Twin Sisters which also tower skyward with pearly peaks, causing a strong impression to be formed in gazing for the first time upon the cloud-kissed Mount Baker.

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A St. Paul storage firm has the original copy of the first list of subscriptions toward the first public school in Washington. It was signed in 1804 by many noted men, including Thomas Jefferson and James Madison, and is now the property of Mrs. Handy of Western Avenue.

POEMS OF PLACES.

SEATTLE.

In terraced beauty sloped away,
Beneath indulgent skies;
Kissed by the green waves of the bay,
Thy domes and turrets rise.
Thy suburbs clasped by shimmering lakes
Close belted at the edge
With scented fir and fringing brake,
That crown each rocky ledge,—
And mirrored in the depths below,
Give back their pictured grace.
In outlines wavering to the flow
The under-currents trace.
Environed with such beauty rare,
Endowed with wealth untold;
The shipping thy proud waters bear
Bring treasures new and old.
With offerings from every zone,
Above thy sisters blest,
Sit thou upon thy princely throne,
Queen City of the West!
Thy welcoming arms are open wide;
Unloosed thy store-house doors:
For westward flows a living tide,
That breaks upon the shores.
And fires glow on many a hearth
The settlers' hands have made
In happy homes of priceless worth,
New found within thy shade.
Then shower still with lavish hand
On all who with the rest,
Rich product of a favored land.
Queen City of the West!

IDA NEWELL AUSTIN.

Dixie, Washington.

AT PROSSER FALLS, YAKIMA RIVER.

I know a spot by the river's brim,
Where all day long, till twilight dim,
The birds in ecstasy twitter and call,
And the blue of heaven is over all.
Tall reeds grow thick on the water's edge,
And willows wave o'er the grassy sedge;
There's a tangle, too, of brake and briar,
And the sunlight creeps, a living fire,
Down deep among the shadows still,
Flooding river and moor and hill.
'Tis there the whitethorn blossoms grow,
And shower their milky, fragrant snow,
To float down the river that rushes by,
And flings back the blue of the summer sky.
And there in the shade of the hawthorn tree,
Is a spot that is dear to you and me,
For its sweetness soothes like a healing balm,
And fevered pulses know its calm,
And over my heart, with its vague unrest,
Stole a heavenly message that filled my breast,
As I sat where the ripples rise and fall,
And the blue of heaven is over all.

BERNICE E. NEWELL.

Tacoma, Washington.

A DAKOTA SUNSET.

On every side one vast expanse of snow,
The shrouded earth lies deathly still and white.
But the live air thrills with the thaw's delight;
The river, past the willow's crimson glow,
Snow-muffled, ice-bound, glides unseen below.
Like pendulum along its arc of light.
A blazing ball above the glittering height,
Enmeshed with golden threads, the sun swings low.
Far toward the east where buttes pile close and high,
On their white slopes the strangest shadows lie,
Blue as reflections from the firmament,
As though some wild west wind had rudely rent
The mystic curtain of the sacred sky,
Then, frightened, dropped the fragments as he went.

I-O-W-A ("THE BEAUTIFUL LAND").

O, "Beautiful Land" of the rolling plains,
Rich land of the "golden seas."
O'er whose shining breast when the winds are free
The hastening cloud-shadow flees.
A land of bloom, and of odors rare;
Plains yellow like beaten gold,
Far-stretching in billowy waves across
To the very sunsets hold.
Above thy meadows of purple bloom
Drift Araby's odors sweet,
Where the lush, pink clovers lie cheek to cheek
In voluptuousness at our feet.
Through your tangled grasses my fingers slip
And I lie with my face close prest,
Till I hear the heart of the great world beat,
Half asleep, on your slumberous breast.
Fair Iowa, gem of the Midland plains,
In your beauty and verdure drest,
Ah, the Indians named thee rightly, my queen,
O, "Beautiful Land" of the West.

MAUDE MEREDITH.

Dubuque, Iowa.



THE BARGAIN CLOSED.

"What wouldst thou give."
The maiden cried,
"To have me promise
To be thy bride?"

"I'd give mine eyes."
The youth replied,
"To have thee promise
To be my bride."

"Thou lovest me not.
For should that be,
I should be but
A voice to thee."

"Nay, nay; mine ears
For this thy grace.
Mine eyes I'd keep
To see thy face."

"Thou lovest me not
Both full appear;
My words of love
Thou hold'st not dear."

"Nay, nay; mine heart
I'd give to thee,
And keep mine ears,
Sweet maid," cried he.

"Thou lovest me not.
For thou wouldst die,
And leave me far
From thee to sigh."

"Take all the love
My heart hath known,
And fill it, empty,
With thine own."

"Thou lovest me!"
The maiden cried.
"I take thy love
Take thou thy bride."

PERSIS E. DARROW.

A Good Laugh.

Chavasse, an eminent surgeon, says: "Encourage your child to be merry and to laugh aloud: a good, hearty laugh expands his chest, and makes his blood bound merrily along. Command me to a good laugh—not to a little sniggering laugh, but to one that will sound through the house; it will not only do your child good, but will be a benefit to all who hear, and an important means of driving the blues away from a dwelling. Merriment is very catching, and spreads in a remarkable manner, few being able to resist the contagion. A hearty laugh is delightful harmony. Indeed, it is the best of all music."

Effect of the Trolley on Watches.

A great many men are wondering what is the matter with their watches. Never since the town was a town have there been so many pocket time-pieces taken in for repairs. The trouble lies in the trolley. The introduction of the electric wires for propulsion, making the car stop and go fast or slow, affects the average watch in a similar manner, and fortunate is the man who gets off a trolley with his watch in the same condition that it was before. He may catch a train or reach the bank in time to pay a bill, but it will be by town clock time, not his own. Every watch thus affected has to be demagnetized.—*Philadelphia Times*.

A Good Suggestion.

A well-known Washington newspaper man wants the two-cent postage stamp made in the likeness of "Old Glory." He has traveled a good deal in out-of-the-way parts of the country, and stoutly maintains that in many of these places the flag is practically unknown. He thinks that this appalling state of affairs could best be rem-

edied by making every letter carry the Stars and Stripes. There is much to be urged in favor of his plan. The postal service penetrates to the uttermost backwoods, and the two-cent stamp is probably the most universally familiar object in the country. If there are Americans so benighted as not to know the national standard when they see it, the red, white and blue postage stamp would no doubt familiarize them with it in the shortest possible time.—*Kate Field's Washington*.

Apples as Medicine.

The remedial use of apples is worthy of notice, say the *North American Practitioner*. The German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter—lecithin—of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood, that old Scandinavian traditions represented the apple as the fruit of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit, renewing their powers of mind and body. Also, the acids of the apple are of singular use for men of sedentary habits, whose lives are sluggish in action, those actions serving to eliminate from the body noxious matters which, if retained, would make the brain heavy and dull or bring about jaundice or skin eruptions and other allied troubles.

Judging Wines.

Most important, perhaps, of all the senses employed in correctly judging wine, is the sense of taste, says a writer in the *American Analyst*. It is necessary, to be thoroughly appreciated, that the wine should please the palate. If one decides that a wine which is disagreeable to the taste is unwholesome, he is not falling very wide of the mark. Professor Lassana says that the front part of the tongue is distinguished for its sensibility to minute differences of flavor, while the back part and the soft palate are notable more for the intensity of their sensations. With this understanding, the wine taster holds the substance in the front of his mouth a few moments, keeping it in motion by gently waving the tip of his tongue. While he is doing this, he should take note of the sweetness, the acidity and the special flavors and, after allowing the wine to pass slowly to the back part of the mouth, information is gotten of the alcoholicity, the age, degree of development, etc. It is at this point that the taster becomes better acquainted with such flavors, as nuttiness, and the port and sherry flavors and if the wine has such tastes as the bitter, woody, lactic and acetic, it is then discovered.

Simple Diet in Obesity.

The *Journal de la Sante* attributes to a medical officer of the French army the latest "cure" for obesity, which is strangely simple in its carrying out. The form of diet was simply a restriction to one dish at each meal, irrespective of what that dish might be, and no matter whether the quantity consumed was greater or smaller, it was made to satisfy the desire for food to the full at each meal. No supplementary dishes, such as soup, desserts or condiments, were allowed; one single dish, and that taken plain, was found to satisfy the appetite much sooner than a variety of dishes, even if the quantity was apparently smaller and on almost an abstemious scale. This regimen was employed also in the case of a lady whose embonpoint threatened too rapid increase, with good results, and without any discomfort in the observance of the restrictions. In fact in one or two instances the reduction of corpulence has seemed to go on too rapidly, and it has been deemed best to take means for restoration, in a measure, of that which has been lost. Under

this system, as under most others, adds *Popular Science News*, the excessive imbibition of liquids has to be forbidden, care being taken not to enforce the abstinence from water, especially to the point where symptoms of circulatory depression arise from insufficiency of volume of blood in the vessels.

Has a Woman More Brain Than a Man?

No; as a rule it is the other way about, as the average man's brain is larger, and between four ounces and five ounces heavier than the average woman's brain—the weight of the adult European male brain being from forty-nine to fifty ounces, that of the adult female forty-four to fifty ounces. This is partially accounted for by the fact that the average woman herself is smaller than the average man both in size and weight. According to Sir James Crichton-Browne, a well-known authority on the subject, after allowing for a woman's smaller size and weight, the man's brain is still the heavier of the two by at least one ounce. It doesn't necessarily follow that a woman's brain power is inferior to that of a man. What she lacks in one way is fully made up in another. Although she does not as a rule display so strong a reasoning and critical faculty as man, she excels him in quick perception and intuition. Nature having endowed woman with different physiological functions to man, her brain power varies in like manner, but in persons of sound mind and body in both sexes, the brains, in one way or another, are very nearly on a par in point of power. The more frequent exercise of certain faculties by men has hitherto, no doubt, enlarged and increased their brain power in those respects, and it is possible that with similar exercise of such powers by women as may naturally be expected from the increasing athletic, educated and business-like capacities of the women of the rising generation, the woman of the future may be as tall and have a brain equal in size and weight to that of a man. Sir J. Crichton-Browne is of opinion that while in such case a woman may gain intellectually, she would lose in beauty and grace, and refers, in support of this opinion, to the people dwelling on a range of hills between the Brahmapootra hills and the Soorma valleys—where the women are supreme. They do the wooing, and control the affairs of the nation, and property descends through the woman and not through the man. They are dominant, but at the same time they are the ugliest women on the face of the earth.—*London Spare Moments*.

Porterhouse and Tenderloin.

A carcass of beef is cut into nineteen pieces. All of the pieces and their names are in the dictionary. Look at the list and you will find the names "tenderloin" and "porterhouse"—two names which the inexperienced buyer has always on his lips. The porterhouse is a delusion and a snare ninety-nine cases out of a hundred. The tenderloin is the thick part of the sirloin after a few round-bone steaks have been cut off, and is called the *fillet de bœuf*. It makes a choice piece of roasting, but if not sold in a lump, is cut into sirloin steaks of three grades. The first and second grades are technically "hip sirloin steak" and "flat-bone sirloin steak." These are the tenderloin steaks that the young housewife pays extra for. There are not over six of each kind in one carcass, so the chances are that she pays her good money for a third-cut or "round-bone" sirloin, which is itself a capital steak.

Porterhouse steaks are cut from the small-end sirloin steak, and one carcass contains but a few of them. Ingenious butchers understand the knack of cutting the small-end sirloins so as to include other portions of the beef, thus enabling them to sell both at porterhouse prices.

Good beef has a juicy or sappy appearance, with a fine smooth grain, which is easily noticed.

The fat, both outside and through the muscles, presents a clear, straw-colored appearance. The flesh should be cherry red. When meat rises quickly after being pressed it may be considered prime. When the dent made by pressing rises slowly or not at all, depend upon it the beef is poor.

Benefits of Gargling.

If people would wash their mouths twice or three times a day with an antiseptic solution there would not be so much sickness. In the last ten years, says a writer, I have never had a cold, sore throat or a fever, and I ascribe this immunity solely to the fact that I follow this plan rigidly. There are any number of proprietary antiseptics that are excellent for this purpose, but many more simple agents that are as good or better. One of the best of the latter is carbolic acid. A very weak solution of this gargled and held in the mouth two or three times a day will work wonders. Immediately after using one will find that the mouth feels cleaner. I believe

its stimulant and sleep follows. When you find yourself "in" for a sleepless night, cover your head with the bed clothes and breathe and re-breathe only the respired air. Thus you reduce the stimulating oxygen and fall asleep. There is no danger. When asleep you are sure to disturb the coverings and get as much fresh air as you require, or, when once drowsiness has been produced, it is easy to go on sleeping, though the air be fresh. What do the cat and dog do when they prepare to sleep? They turn around generally three times, and, lastly, bury their noses in some hollow in their hair, and "off" they go. They are in no danger, although it might look as if they were, from the closeness with which they imbed their noses.—*The Great Divide.*

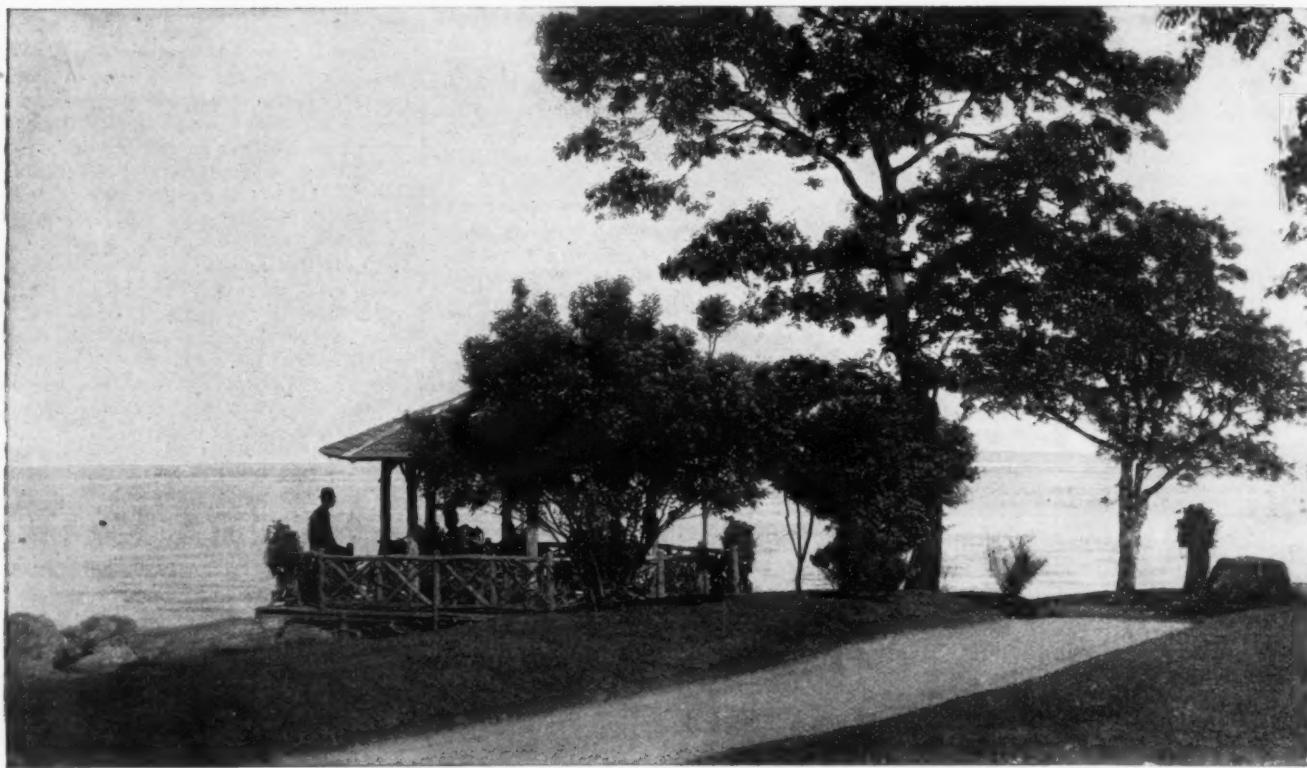
About Dreams.

It is possible that when the spirit acts it dreams that there may be a resemblance to that state in which the mind will exist after death. Sleep is an imitation of death, and why should not dreams be an imitation of the after life of the

made the means of connection between the visible and invisible worlds, and from the strong impression sometimes made by vivid dreams even those who are not superstitious can scarcely set aside the belief that an unseen finger points and an unseen presence appears in the visions of the night.—*Pilot Mound Sentinel.*

Preserving Fruits in Lime.

A new method of preserving fruits and vegetables is use in France, says an exchange, consists simply in bedding the fruit in lime. The following is given as a general statement of the results of experiments: 1. The lime does not in the least attack the skin of the fruit, even after prolonged contact. 2. The fruit does not dry any more in the lime than in the air. 3. No change takes place in the fruit other than such as is the natural consequence of its evolution. The method was tested on oranges, artichokes, cherries, gooseberries, prunes, tomatoes, onions, potatoes, grapes, pears, apples, sugar-beets and chestnuts with the shells removed. Tomatoes



SUMMER EVENING AT WHITE BEAR LAKE, NEAR ST. PAUL.

that a great majority of the common throat and lung troubles come from the lodgment of disease microbes within the mucous membranes of the mouth. The free use of antiseptics will kill these germs.

A Word to the Sleepless.

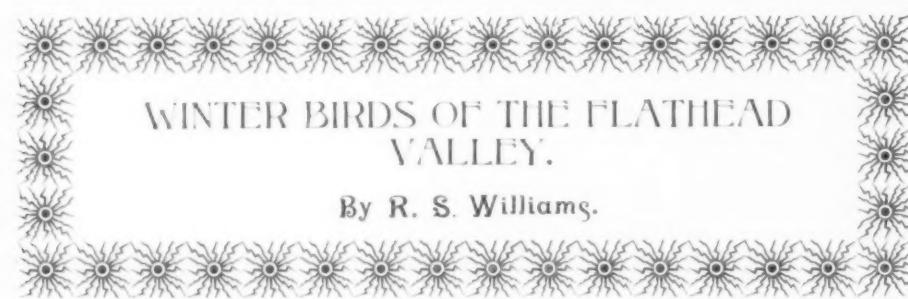
Dr. J. E. Huxley writes that the way to go to sleep, is in brief, is to curl under the clothes like a kitten, or put the head under the wing like a hen. This insomnia seems to be now a universal affliction. We live wrongly; sit up too late and overwork the brain, and then go to bed in an excited condition. No one seems to have hit upon the natural remedy. I think I have. People take chloral and the like at their peril, and the fatal consequence not seldom ensues. It is all wrong, for you cannot control the dose required for the exact circumstances. But try nature's plan instead: Lower the supply of oxygen to the blood, produce a little asphyxia, limit the quantity of air to the lungs and heart, and circulation becoming quicker, the brain loses

dead. In sleep the body is powerless and yet the soul is, to some extent, active, and wanders and thinks, makes plans, feels pleasure, suffers pain and anxiety, but experiences very little fear. With dreams distance is no obstacle to a change of plans; time is disremembered, for memory fails to connect the past with the present. Those who have been long dead appear to us without causing either surprise or excitement, and yet their faces and forms are recognized and their presence is enjoyed. The dreamer loses track of time and, although perhaps old, for a little while he seems to become young, and fancies that he is engaged in former employments without feeling surprise. It is possible that the visions of the dreamer are like the first dawn of reason in the mind of a child and that the spirits of the dead may gather knowledge and power as the neve-rending years roll on and that a celestial or some other kind of an education is acquired after death. If the land of dreams is not a little like the spirit world there is nothing on earth that can resemble it. In old times dreams were

kept well for two weeks, and half of them for five weeks. In another trial, tomatoes picked before fully ripe, in order to save them from an early frost, and put in lime on October 22nd, were good till January 15th. Pears of a variety that have been unable to keep beyond December in any other way, kept well in lime till the middle of April. The most interesting results, and it seems to Dr. Caldwell the most striking, were obtained with grapes. Three varieties were packed in lime on September 13th; the first examination of them was made December 22nd, when all were in good condition; April 15th two bunches of one variety were taken out, one of which was fairly well preserved, the other very well; all of one of the varieties were in a bad condition and were removed. On May 2nd the box was emptied, and all of those still remaining were in excellent condition. In another trial made in the preceding year, the last bunch of grapes in the box was taken out July 1st, when half of the berries were well preserved and had an exquisite flavor.

WINTER BIRDS OF THE FLATHEAD VALLEY.

By R. S. Williams.



Northwestern Montana appears on the map, with its numerous mountain ranges and northern latitude, as a rather unattractive spot to possess any great variety of birds among its winter residents; yet I doubt if any region eastward on our continent on the same parallel has an equal number of species. This may doubtless be accounted for by the comparatively mild, though long, winters, and the excellent shelter afforded by the timbered valleys with swift mountain streams and lakes, many of which remain open at least the greater part of the year. Without having given the subject some attention even an old resident might say that very few birds could be found here during the cold weather; and it is true that there are not many that occur in such numbers as to attract general attention, yet a little search will reveal many a shy and unsuspected feathered inhabitant somehow gaining a living above the deep-piled snows.

First among the larger and more noticeable of our winter birds are species of the crow family, and of these, one of the most frequently observed is called Clark's nutcracker. This bird is somewhat larger than the jay and is usually seen flying, with noisy wings, high overhead, from one tall tree to another, or often perched on a topmost branch and uttering rather harsh, yet not always unpleasing, notes. In the fall, before the snows, they will occasionally gather in flocks of one hundred or so and descend to feed among the fallen pine cones, when they may be readily observed, as they walk about much like black-birds. The seeds of the pine seem to be one of their chief articles of food, and I have shot a bird so gorged with them that on striking the ground the seeds were forced out of its mouth in considerable numbers.

Another conspicuous bird is the magpie, that roves about in small flocks, abundant in a locality for a few days, then perhaps not seen at all for a prolonged spell. These birds have a poor reputation generally, as they seem inclined to take especial delight in worrying disabled stock of all kinds, and moreover, they follow the hunter about pretty closely, ready at a moment's notice to pounce down on venison or other game in any way exposed. It is astonishing what a quantity of meat a single bird will eat in an hour or two, and a flock, undisturbed, will soon despoil the whole carcass of a deer.

Of jays we have two species, rather common, one dark blue shading to sooty black, with trim form and fine crest and about the harshest notes of any bird I know; and the other, a quiet, sober-colored bird, with soft and most pleasing voice. This last enjoys the rather formidable and dubious sounding title of camp-robber, but in my experience it is scarcely deserved by a bird that has always proved quite harmless and sociable, frequently alighting within a few feet of one, yet so quietly that not the rustle of a feather strikes the ear. They will eye one curiously for a few moments, perhaps, then disappear as silently as they have come.

One more bird of this family is frequently seen at all seasons of the year, and usually in pairs, namely, the raven. With many these birds pass for crows, but in fact they are a much larger,

finer bird, frequently stretching over fifty inches from tip to tip of wing, and measuring about half that in length. They have such acute perceptive powers that it seems almost impossible to creep onto them unobserved, yet occasionally one can approach quite near them when in full view. Besides the usual caw, like that of the crow, they have many other notes, one resembling closely the sound produced by filing a large circular saw at a little distance; and this note, by the way, is more musical than might be inferred from the comparison. Another entirely different sound is much like the croaking of a large frog.

The raven has occupied among birds a prominent place in literature for ages past, and the poets especially have applied to him some rather harsh lines. They must have inferred that as the blackness of night inclosed many an evil deed, so a bird so very black must harbor more or less of evil; and among other things we read—

"A cursed bird too crafty to be shot,
That always cometh with his soot-black coat
To make hearts dreary—for he is a blot
Upon the book of life."

In truth, the bird is doubtless most useful as a scavenger, and if he is too sharp to be easily hoodwinked that is surely to his credit. A far more pleasing line refers to "the beautiful gloss of the raven's wing," and so we will leave him and take up another group of birds that occupies a place

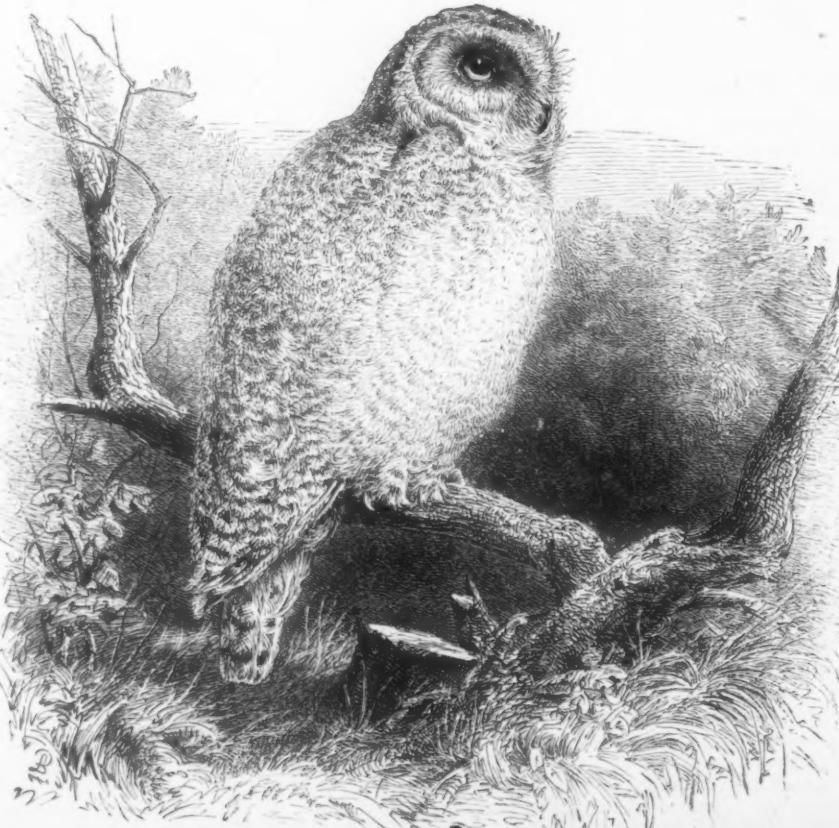
quite similar in poetry and legends of the past to the grim bird of Denmark.

The owls, many of which are resident throughout the year wherever found, unless in the very far North. A variety of the great horned owl is one of the commonest and most observed on the Flathead River as elsewhere. Their hooting is well known to almost everyone, but a peculiar harsh screech they more rarely utter is usually attributed to some other species. Omitting all the bad things said of these odd birds by the poets, simply, I suppose, because they are creatures of the night and possess such strange voices, I will quote some lines of Barry Cornwall, to which even the most sensitive owl could hardly object—

"Mourn not for the owl, nor his gloomy plight!
This bird hath his share of good:
If a prisoner he be in broad daylight,
He is lord in the dark green wood!
Nor lonely the bird, nor his ghostly mate,
They are each unto each a pride;
Thrice fonder, perhaps, since a strange dark fate
Hath rent them from all beside!
So when the night falls, and dogs do howl,
Sing ho! for the reign of the horned owl!
We know not alway
Who are kings by day,
But the king of night is the bold, brown owl."

In addition to his kingship there are two other owls, the snowy and great gray, of about the same size as the above, that are probably found here, as they have been observed in other parts of Montana, besides a number of smaller species, among them being a variety of screech owl, the saw-whet owl and the pygmy owl. This last is remarkable for his small size, measuring only six or seven inches long. He is every inch an owl, nevertheless, and quite as bold in his line as the largest. In warm spring days he comes out occasionally in the bright sunshine, evidently to enjoy the returning warmth and utter his mellow cooing; but for the present we will leave him to doze away the hours in some sunken hollow and pass on to the birds that usually furnish him with his warm winter quarters.

The woodpeckers, of which there are at least



THE SNOWY OWL.

six species resident here winter and summer. Varieties of the downy and hairy woodpecker are common. Two species, with three toes to the foot, are found; one, the arctic, being common, the other more rarely observed. The red-shafted flicker occasionally remains all winter, although most of his kind depart for warmer climes, and last and largest of all, is the pileated woodpecker or log-cock, a bird not infrequently met with almost everywhere in the timber. They often select some particular tree in the forest and work day after day stripping off the bark. One yellow pine I observed, probably two feet in diameter and ninety or one hundred feet high, was thus stripped of its bark all round up to a height of forty or fifty feet. The bird or birds had probably been working at the task for several seasons. Trees thus selected seem to be more or less decayed always, and consequently harbor many grubs of various insects.

A bird that always seems rather out of place here in winter is the kingfisher, yet small numbers remain throughout the year. To see a kingfisher scurrying down stream before a gale, with the thermometer below zero and scarcely any open water in sight, does not exactly accord with one's ordinary ideas of the "halcyon days" of the poets.

Another bird that depends on the open water of the rapids and spring-holes for a living is the ouzel, a slate-colored bird, quite wren-like in form and nearly as large as a robin. These birds are noted for their song as well as the fine nest of moss they build against some perpendicular rock, arching it over and making a neat entrance on one side. Although the ouzel is quite duck-like in habit, it is more or less related to the wrens and thrushes in structure.

Of ducks there are four or five species, at least, to be found in cold weather, the mallard and merganser being two of the commonest.

The grouse family is well represented by four species, besides, perhaps, a stray ptarmigan or two. Western representatives of the ruffed and sharp-tail grouse are the common species found in the valley, while Richardson's and Franklin's grouse are only occasionally met with.

Among the smaller birds of winter are several species of the sparrow family, crossbills being one of the most abundant; also, there is the Northern waxwing, Townsend's solitaire, a fine songster, and a number of very small birds, many of which find shelter in the holes of trees during cold nights and in severe storms. Of these last are two or three species of nuthatches, the little brown creeper, some four species of chickadees, two of which are common, and the winter wren and golden-crowned kinglet. The last two mentioned were scarcely to be expected here in winter, yet, greatly to my surprise, I found a flock of four or five kinglets and one wren living in some rather heavy spruce timber in the latter part of January. They appeared fat and lively and seemed to have a familiar acquaintance with the interior of a brush-pile, well covered over with a thick coating of snow, except a few openings on one side. They evidently had quarters where they could stand off almost any amount of cold.

In conclusion, it will be seen on looking over this sketch that a good many birds are not mentioned that undoubtedly occur in the region in winter, but to give anything like a complete list would require observations extending over several years and made in different parts of the valley.

The manufacturers of the new lignite and hay-burning stoves—the St. Paul Stove Works Co., who recently sent a representative into North Dakota to exhibit them, report great interest on the part of the people and sales far beyond their highest expectations. The company sagaciously made certain it was just what was wanted before putting it on the market.

A WELL KNOWN MONTANIAN.

Among men none are more prominent than those who have advanced themselves from humble places to positions of affluence and honor. Some men are made great by chance, others have "greatness thrust upon them;" but he who is most deserving of respect is the one who rises by his own might and will, surmounting all obstacles in his path and accomplishing that which he undertakes. By the unwavering zeal of such men have the glories of the great West been made known to the world; and while the resources of the West here have been by man developed, it cannot be denied that the West has done much in developing the man.

Among Montana citizens who have battled with the ups and downs of frontier life and by perseverance have merited the respect of their fellow men, is Mr. Maurice Sullivan, now a resi-

dent in this work an accident occurred which is worthy of mention. One night a band of renegade Indians stole from Mr. Sullivan's camp about twenty head of horses. Next day, with a small party of men, Mr. Sullivan started in pursuit of the thieves, a few days later overtaking them in the Little Rocky Mountains in Northern Montana. Notwithstanding the red men outnumbered their pursuers ten to one, in a lively skirmish they were beaten and the stolen horses were recovered.

In 1883 Mr. Sullivan located in Fergus County, Montana. In 1886 he was appointed deputy sheriff and soon advanced to the under-shership. Afterwards he was manager of the large horse-ranch of Messrs. Seligman & Hauser, of Helena. In 1889 he was elected sheriff of Fergus County on the Democratic ticket, and served a three-year term, at the same time acting as a deputy United States marshal. At the end of his term



MAURICE SULLIVAN, OF LEWISTOWN, MONT.

dent of Lewistown. Mr. Sullivan was born at Augusta, Georgia, December 12th, 1856. He attended the schools of his native town until 1869, when he removed to Montana. In 1873, while yet only seventeen years of age, he was a Government scout with the forces of Stanley and Custer, and was with them during many of their skirmishes with the Sioux Indians. Afterwards for a number of years Mr. Sullivan was issuing-clerk and chief-of-police at Peck Agency, where, owing to his knowledge of the wily Indian, he was of much service to the Government in the quelling of a number of incipient outbreaks. In 1880 he again served as a scout under Colonel Elgers, and took a prominent part in the capture of Chief Gaul, and the subduing of his troublesome tribe. While serving under Colonel Elger, Mr. Sullivan received a dangerous bullet wound in the back.

Leaving the Government service in 1882, Mr. Sullivan secured a contract to build a portion of the Canadian Pacific Railway. While engaged

he was renominated by his party but withdrew in favor of W. D. Deaton, who was nominated, and principally through Mr. Sullivan's efforts was elected by a large majority. During his term of office, Mr. Sullivan was one of the most efficient officers ever elected to the shrievalty in Montana. In 1893 he was a prominent candidate for the United States marshalship of Alaska, and had the endorsement of all the prominent Democrats of Montana, and a majority of congressmen and many United States senators; but for some reason he was not favored with the appointment.

Mr. Sullivan in 1887 was married to Miss Mary McGinnness of Wisconsin, and is the father of three bright, rosy-cheeked children. Mr. Sullivan is engaged in general merchandizing at Spotted Horse, and he is also extensively interested in mining near Maiden, Montana, where he owns a number of rich gold and silver properties.

D. M. CARR.

A COWARD HEART.

By W. R. Lighton.

John Redfield sat astride his restless little yellow pony, toying with his short quirt, looking down, now and again, into the face of the little sun-browned girl who was standing carelessly beside him. He was ill at ease, and being a man he did not fail to show it; she was hardly better pleased with the situation, but being a woman, she was composed.

"An' hain't ye got nothin' more to say to me?" he asked, half appealingly.

"I don't know what more there is to say," she responded; "when a man asks a woman to marry him, an' she says no, it don't look as if there ought to be much more said."

"But there's a heap more to say, just in this case," he returned. Being a man, he was persistent in the face of adverse circumstances. "Any rate, I ain't done talkin' yet, and you hain't given me no reasons. But I can guess them, pretty near. I'd just like to know, for sure." He still regarded her face intently; she would not meet his sharp blue eyes, but looked away across the wide prairie beyond.

"It's Bill Waterson," he went on, after a moment's silence; "I know that all right; I ain't been hangin' around here all this summer not to have seen him, an' to have seen what you set by his big, lazy, good-lookin' carcass. Women generally takes after a big bulk; don't make no difference if it does hold a coward heart." He was letting his feelings get the better of his judgment. She looked straight into his eyes now, half-smiling and wonderfully self-contained.

"It don't look to me like you ought to say anything about cowards, talkin' hard an' callin' names like that about a man that ain't here to hear you."

He winced and his face flushed red under its tan. The restless pony received a smart correction with the quirt by way of vent to the rider's feelings. "I ain't afraid to say it to his face, if I do be short," he retorted; "he's just a plum natural born coward; he ain't worth your lookin' at twice. Don't I know him? But, then; I didn't start in to pick no fuss with nobody; I just wanted to make sure I was right. You might tell me that much, anyway. Tain't much to answer a civil question like that."

"You hain't asked me no civil question, except when you asked me to marry you, an' I answered that civil enough." She was embarrassing him again with her good-natured smile.

"Is it Bill Waterson?" he asked, abruptly. Being a man, he took rude pleasure in tantalizing his love with jealousy. She answered him quite as abruptly.

"Yes, it's Bill Waterson," she said, "coward heart an' all." There was an unusual color in her cheek, but that was all.

He had nothing more to say then; he raised his hand, struck the pony's flank a sharp blow, and the little beast broke into his nervous gallop.

* * *

The gold of October had faded into the brown of November, and the winds which a month before had stirred the living grasses upon the wide green plains now hurried over the sere stretches of yellow as though anxious to reach a more possessing scene. The air was heavy with all the signs of the approaching desolation of winter and with the blue haze of smoke from

the fires, sweeping the prairies off to the northward.

Through the month Bill Waterson had had things quite his own way, and his "big, lazy, good-lookin' carcass" had become more than ever a familiar object around the Barrow ranch, and gossip said that it was all up with him. He did not see any necessity for correcting the rumor; he was quite content to let it have its way. Redfield had remained away from the place, even omitting the occasional social visits which the etiquette of the West demanded. He took the neighbors' chaff stolidly, and kept himself in his own cabin, building comfortable quarters for his stock and making all ready for the winter. His mind had been troubled as he watched the growing indistinctness of the landscape under the haze from the autumn fires, and he had cleared the prairie of its dead grasses for a space of many rods about his cabin and stables.

"There's bound to be trouble, if the wind don't change an' blow somewhere else," he said; "just let the fires get started down the valley in this high grass, an' there'd be the devil to pay."

He stood in his cabin door one night, looking with very sober eyes at the dull glow of red showing upon the northern horizon. The wind had risen during the day, blowing almost a gale as night settled down, and the dim haze which had been hanging in the air had deepened and grown to distinct blue clouds, quite shutting out the sun. The range cattle and the small animals of the prairie had taken on something of the general sense of uneasiness, and all day had drifted hurriedly past to the southward. He had occupied himself through the hours of daylight

in widening his area of safety and throwing water from his well over the roofs of his stables and cabin.

"There's sure to be trouble, an' before mornin', too," he assured himself, and than another thought, hidden in the depths of his mind throughout the day, came half-audibly to his lips.

"I wonder if Barrow's got his place cleared off. Looks like he'd know enough to watch after it, with this smoke hangin' around for so long. But I wish I knew. Shucks!" he added, with a sudden disgust at himself; "let him look out for himself. He could have put that big, lazy hound of a Waterson to work, if he'd wanted to; there ain't no reason why he shouldn't have things fixed all right." Nevertheless, through the next half hour he could not quite dismiss his anxiety; it grew upon him with every passing minute until at last, with an almost savage resentment of his own weakness, he slammed his cabin door, saddled his little yellow pony and struck off over the snake-like trail toward Barrow's home. Yes, all was made safe there; he could see that from quite a distance, the ground having been cleared for a wide space around the houses. That was all he wanted; he would go back home now. But he caught sight of Barrow himself standing in the low doorway, with anxious face turned toward the line of red on the prairie. He would at least exchange a word or two.

"Hello!" Barrow said, in greeting; "ain't this h---l? It'll be here in an hour; mebbe less; it's just a hummin'." Already the dull glow had grown more intense at jagged intervals, and they could see sudden little spasms of light shooting into the air, where the flames had advanced the farthest.

"Yes, we're all right here," Barrow said; "only I'd feel a durn sight easier in my mind if Annie was here. She and that feller of her'n went off a hoss-back a while before dark; up to Smith's ranch, I reckon."

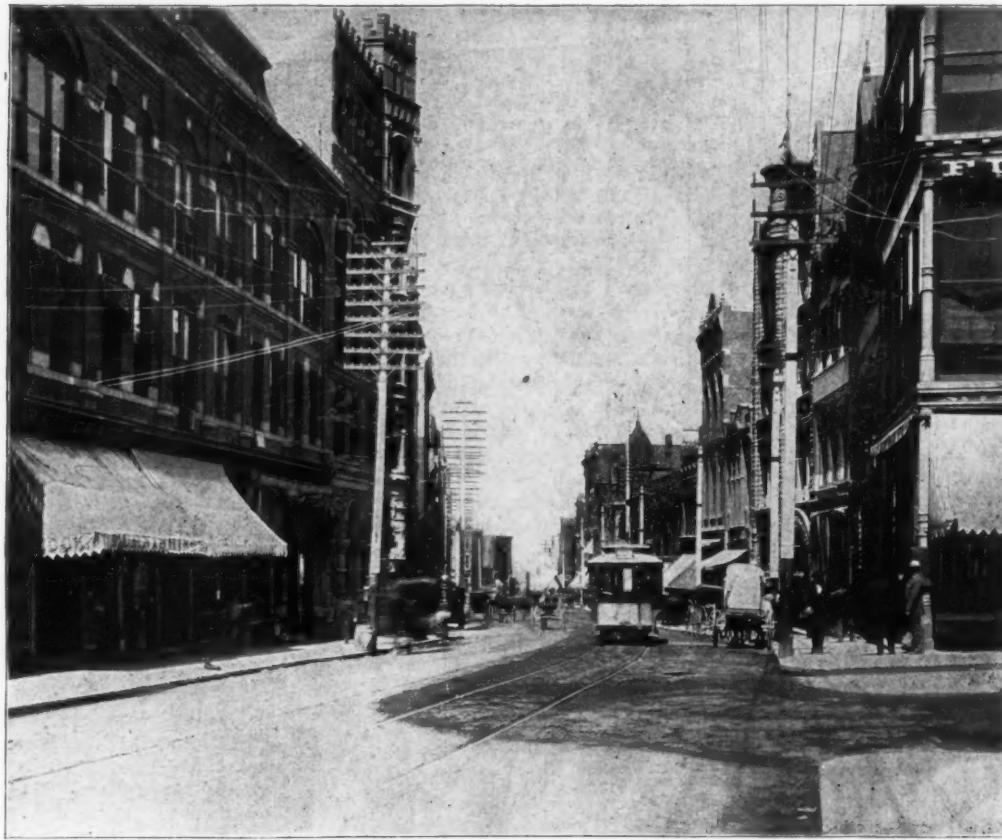
Annie! Out on the prairie with Waterson now! He felt the hot blood rush into his face.

"Why don't you light out an' see?" he questioned, his voice sounding far off in his own ears.

"Light out nothin'!" Barrow said, "I'll be



"AN' AINT YE GOT NOTHIN' MORE TO SAY TO ME?"



A STREET VIEW IN HELENA, MONTANA.

needed right here. If that big hulk of a feller ain't able to take care of her—" But the other words were lost, for Redfield had lashed his pony into his nervous, quick gait over the trail toward the Smith ranch.

The wind freshened with every minute; there was a long, low, unbroken line of fire upon the prairie, now, brightening momentarily as it rushed on before the wind, lapping up the dry, rank fuel offered it by the fine valley soil. At last Redfield reined in his pony and sat for a moment, irresolute.

"I can't get there," he assured himself; "I'd better get back to Barrow's place. That big lubber'll watch out for her all right." Then suddenly he saw, through the brightly illuminated haze, the dim outlines of two figures approaching over the trail before him at a wild gallop.

"That's them," he muttered, rising in his stirrups for a little wider view. He stood motionless for several seconds, his keen eyes, accustomed to such scenes, watching closely the race between the swift fire and the sturdy little horses. Nearer and nearer they flew, growing more distinctly outlined in the hazy atmosphere with every moment, and Redfield breathed a sigh of relief. "They're all right, if they keep up that gait," he said, and he settled again into his saddle, tightening his rein and preparing to strike spurs into his pony's flanks. The riders were but two hundred yards away; not half a mile behind them was a belt of fire driven before the lusty wind.

Suddenly Redfield's heart leaped in his throat and his soul sickened. The pony which Watson was riding had stumbled awkwardly, half-recovered himself and then pitched headlong upon the ground, throwing the rider violently from the saddle. The girl was riding in advance; she had not seen; she was straining every nerve in urging her horse forward toward safety. A wild sense of exultation arose in Redfield's soul. Death was waiting for Watson—no, it was

leaping, rushing upon him. Death! And then Annie—God forgive him! He shut his teeth together, threw himself low upon his pony's neck, struck spurs into the eager little beast and made a mad rush forward, straight toward the roaring, hungry fire. It was but a moment until he reached Watson's side. The other horse had struggled to his feet and galloped away, terrified and riderless. Watson's face was blanched, as he stood regarding Redfield's approach.

"Get up behind, quick!" Redfield gasped, and the other needed no urging to throw himself upon the back of the little pony behind the saddle, and the brave beast struggled sturdily forward again under his heavy burden.

It took but a moment to show the hopelessness of it; the pony could never reach safety with both of them. It was death for both now unless—

Life was sweet, and Redfield hated the man mounted behind him. But Annie loved him. Perhaps life would be a poor thing to her without him. It was a bitter struggle. Then suddenly he felt his arms grasped and held close to his sides by strong hands, and he was lifted clear of the saddle. "God help ye!" he heard Watson's strained voice say, and then he was dropped upon the ground. The pony, relieved of part of his load, bounded forward again, and he was alone upon the prairie. In a minute more the fire would be upon him. He threw all the energy of desperation into the mad task of tearing up the grass and clearing a small space which was to serve him for protection. Then the fire burst over him, leaping, seething, writhing, and he threw himself downward upon the bared space of ground, gathering his coat close about his head.

* * *

Slowly, slowly, his scattered senses came back to him. Every limb was living fire, and the roar of the flames was still in his ears. No, it was a cool breath which fanned his forehead and

lips, grateful as the air of paradise; it was not the red glare of the rushing flames which touched his half-seeing eyes; it was the clear light of day. And surely those were not phantoms hovering above him; that was certainly Barrow leaning over him, though there were tears glistening in his eyes and in his big brown beard, and a strange tremor in the voice which said: "The Lord A'mighty be thanked!" And yet, surely it must be heaven, for it was Annie's sweet voice which whispered, so low that he could just hear, "John! My John! Will you forgive me, dearie? For I love you better than all the world." It was Annie's sweet face which bent close, close, until her warm lips touched his own.

A BUSINESS STREET IN HELENA.

The buildings of Helena have for several years past been a surprise to the Eastern or foreign tourist. The number of costly structures, elegant and tasteful in design, that line the principal business streets is really remarkable for a city of less than 20,000. The cut on this page shows a portion of Main Street, and is a fairly representative scene in the business district.

DEEPEST LAKE IN THE WORLD.—In the Cascade Mountains, about seventy-five miles northeast of Jacksonville, Oregon, the seeker for the curious will find the Great Sunken Lake, the deepest lake in the world. This lake rivals the famous valley of Sinbad the Sailor. It is said to average 2,000 feet down to the water on all sides. The depth of the water is unknown, and its surface is as smooth and unruffled as a mammoth sheet of glass, it being so far below the mountain rim as to be unaffected by the strongest winds. It is about fifteen miles in length, and about four and one-half miles wide. For unknown ages it has lain still, silent and mysterious in the bosom of the great mountain range, like a gigantic trench scooped out by the hands of a gigantic genie.



THE BOLD BUCAROO.

Over the hills on a broncho's back,
Far o'er the prairie's endless track;
Away where the bunch grass wild and long
Dances and waves to the brooklet's song.
Far from the city's noisy whir,
With broad sombrero and clanking spur.
Fringed "shaps" and pistols, too.
Happy and free rides the bold bucaroo.

As free as the reindeer, trouble or care
Never exist in the bucaroo's fare;
No thought of to-morrow, sorrow or strife
Weakens his slumber or darkens his life.
With shout and song he gathers his steers,
He is free from trouble, sadness or fears;
His boots for a pillow, the prairie his camp.
His home is the saddle, a star is his lamp.

After the season's work is done,
Mavericks branded and winter come,
Then to town for his annual spree,
Speedeth the bucaroo wild and free.
There in the dens of vice and sin,
Mid sirens' charms and fumes of gin,
There mid the shouting, swaying throng
Mingles the shout of the bucaroo's song.

* * * * *
Over the hill on a broncho's back,
Far o'er the prairie's endless track,
Away where the bunch grass lyeth dead
He stops at the brook to bathe his head.
Far from the gin mill's rush and roar,
He vows to linger forever more;
Sick and sorry and busted, too—
Such is the life of the bold bucaroo.

—J. H. McCune in *Dillon (Mont.) Tribune*.

Nothing to Tie To.

An incident of the recent great floods in Washington is related by the *Spokane Review*:

While the steamer Nelson was lying idle Captain Troup resolved to explore the Kootenai River and sent out Captain Heywood with instructions to run cautiously to Bonner's Ferry and return by easy stages.

"Take it easy, pick up whatever business you find, tie up nights, and take no chances," was about the gist of Captain Troup's instructions to Captain Heywood.

Heywood steamed out, and a full day earlier than he was expected returned. Troup knew the river and the capacity of the boat and was surprised.

"Did you go all the way up?" he inquired.

"Yes."

"Did you tie up nights?"

"Naw," replied Heywood, who is more of a man of action than a man of words.

"Why didn't you?"

"Nothing to tie to."

Heywood had found the whole valley afloat, its business afloat, and its landing places and barns and everything else in the swim.

An Old Story Newly Told.

Soon after the Northern Pacific Railroad had been completed west of Bismarck, some Indians climbed on the train and were given the privilege of a free ride. They were of the Gros-Ventre tribe, and in a seat in front of them was a woman with false teeth. In their presence she took her teeth out and afterwards replaced them. The noble reds were astonished at this performance. They clapped their mouths in loud hi-hi-hi's, ran to the brakeman, and asked him plainly if he could take his teeth out. They appeared to think that this particular feminine pale-face had some supernatural gift, and offered their guns, clothing and all their worldly possessions for her teeth.

Then they walked up to the woman and attempted to peer into her mouth; but the old lady was equal to the occasion, for she scolded and abused them so soundly that, afraid of bad medicine, and in great alarm, they insisted on leaving the train at the very first station they came to.

As Seen From Bellingham Bay.

Yesterday morning it was all calm in Whatcom, but Mount Baker's dome glistened in the sun, and the old monarch was enjoying a great blow. The snow rolled and tumbled up from the south side, whirled across the dome and fell over to the north, mass after mass tumbling toward the pole. With a strong field-glass even the little whirlwinds, catching up the snow on the summit, could be plainly seen. South, across the bay, the Olympics were massed like great cumulus clouds, pile upon pile, the valleys and gorgeous blue in the distance. In the foreground were the blue waters, then the long line of Eliza Island, its thinned firs and cedars pointing skyward, then islands stretching away in the distance, the green changing to blue mist until the base of the Olympics was reached.—*Reveille*.

A Town Without a Name.

A new town without a name is growing up just where the White Salmon River empties into the Columbia. To the neighboring settlers this bustling little community is known as "them Bellamy fellers from Spokane." Here it is called the "Washington Co-operative colony." But the men and women who left this city two or three months ago to found the new town have been too busy thus far to choose a name for it, to say nothing of drawing plats and sending out town-lot circulars in accordance with the recognized customs of the country.

Just at present, says the *Spokane Review*, they are cutting trees and sawing lumber for their new homes, the crops being well started and the orchards needing little attention for a month or so. There are already three houses on the farm, and ten more are to be built this summer, each having from four to eight rooms. Every man is allowed to plan his home about as he wants it built, and when completed he will pay rent at the rate of four per cent a year on the actual cost. As the trees are cut, the lumber is sawed and the houses are built by the colonists, and all work is reckoned at \$1.00 per day. It will be seen that the rent bills are not very heavy—perhaps one-tenth what similar houses would bring in Spokane.

The colonists hope to finish building all their houses this summer, besides raising a big crop and marketing a large amount of fruit. The profits from the fields and orchards, aside from such expenses as are actually necessary, will be spent in stocking up the co-operative store. The winter will give them time to prepare a large amount of lumber, and next summer they will begin putting up the public buildings—a school house, a town hall, a sanitarium, an academy and such institutions. Before the end of 1896 the co-operators expect to enjoy many comforts and luxuries that are only to be found in large cities—and to enjoy them free of charge, too.

His Experience.

Grant county, Oregon, is the place for the man who sighs for the good old times. Its delights are thus described by the sheriff, who came out with a prisoner: "I've lived there nigh onto forty-two years. I'm only forty-three now, and I came there when a yearlin'. Canyon City is the county seat, and though there are only about 300 of us in the town, we have a nice time. There's lots of women folks and society. Everybody has some money and there's no tramps. You see, we are ninety miles from Heppner, the nearest railroad town, and tramps don't like to walk ninety miles. Canyon City used to be bigger than it is,

but most of the people have gone away. There's only 5,000 people in the county now, and it's a big county, too. We have lots of stock, though, and when horses will bring a good price there's a lot of us who'll make some dough." This suggests an incident of the Portland boom. One of the Grant county pioneers had made a little fortune in sheep, and went down to the city to educate his daughters. When the boom was at the apex he thus narrated his experience: "D—n booms. Here I was, happy and out of debt. The boom started, and a fellow from Los Angeles offered me \$10,000 for my home; costs six. Wouldn't take it, and Los Angeles gent offered 12; took it and was turned out. Had no use for the money, and wanted the place back again; Los Angeles man asked \$20,000; had to pay it, \$8,000 mortgage on the place, and nothing to show for it. D—n a boom."—*Spokane Review*.

Recollections of a Tourist.

"Skeeter Joe," a professional hobo tourist, gives in the *Chicago Record* a faithful account of a very brief visit which he made Jamestown last season while on his way across the continent. The "Skeeter" says:

"When I was in Minneapolis, I decided to go out to the coast; I got on the train at Northfield junction, just west of Minneapolis. I was put off at the first stop, but as soon as she started I got on again. When she was pulling into Sauk Rapids the brakey saw me, and off I went again. This kept up till I had been put off eight times and ridden everything from the rods to the brake wheel. I then attempted to get in with a number of horses, but the man who was taking care of them rapped me on the nose with a halter. I concluded those horses didn't want my company and walked down along the train till I came to a seal that was loose. I promptly broke it and climbed on the ninth time, and I managed to hold this down for the rest of the division. On the next division I boarded the bumpers of a local. The con. came along the top and kicked me in the back of the neck. She was going about twenty an hour, but I jumped and landed on my face in the cinders. This made me mad. I grabbed a chunk of coal, and letting her fly took to the woods. He stopped the train and sent the crew after me. After they got tired of the hunt I came out of the woods and boarded another train, reaching Valley City without further mishap. When I got off at Jimtown the yard master took and shot at me. He missed and I dodged behind a box car, took to my heels and caught a freight just as she was pulling out of the other end of the yards. I was on the next division skating along toward Mandan, when two brakies came along and stopped beside me.

"They didn't say a word—they just grabbed me, one on each side, and tossed me into the atmosphere. I didn't stay there long, but before I had time to realize I had ever been there I was turning somersaults over the prairies in the direction of Bismarck at the rate of about forty miles every sixty minutes. I don't believe I'd have been stopped yet if I had not run into a section house that got into my way. That was the worst trip I ever had. It nearly put me out of the business for all time."

Apology for Cross Words.

"On my overland trip to San Francisco I was treated to the exhibition of a rough ranchman put very much on his good behavior," said a New York lady. "We had got out at one of the stations in Nevada for dinner. I have forgotten the name of the place, if ever I noted it, but if it wasn't Poverty Flat it was misnamed. Not feeling hungry, I leaned back in my chair, idly looking through the open window opposite, unmindful of the rat-tle of knives and plates around me. A rough voice in my very ear startled me from my dream.

"Here, why 'n thunder don't you pass me the butter?"

"It came from the nearer one of two stalwart, sunburned men, who seem to be ranchers or miners. They sat beside me in dusty high top boots and rough peajackets, with their broad-brimmed hats on, and were eating as if they had long arrears to make up in the way of square meals.

"Imagine my astonishment at such summons, which I made no doubt was addressed to me. But I was too much intimidated to be indignant and hastily handed him not only the butter, but everything else within my reach. At this he looked round at me for the first time and his look of amazement showed that he was worse taken back than I had been. He did not thank me, but took his hat off and put it under his chair, and nudging his companion, said in an awestricken stage whisper:

"I say, Jim, take your hat off; she's a lady."

"Then, evidently wishing to make further amendments for his courtesy, he again turned to me:

"Say, marm, hev ye ever seen a live wildcat?"

The Chippewas' Farewell.

A correspondent of the *Minneapolis Journal* thus describes the removal of the Chippewa Indians from their camping ground near Hinckley, Minn., to the White Earth Reservation:

It required all the inducements the Government representative could offer to persuade the people to go. Following a custom that has been in vogue with the Indians since the first white man invaded his haunts, they held what might be considered a farewell pow-wow on the banks of Lake Pokogama. In the morning birchbark canoes were seen gliding swiftly along to the spot where the Chippewa mission was established and where the first printing was done in this State. At an hour before sunset the place was swarming with copper-colored Indians and tan-faced half-breeds. A large number of white persons were also present to witness the strange ceremony of leave-taking. An old squaw, Pi-a-gic, bent with age, was seated upon a small mound; around her were congregated the tribe. Not a sound was uttered for a quarter of an hour

where. The white man would have us in battle no more. The pale-face says it is good for us to go. We go to another land. We weep on the graves of our brothers. When the sun rises we will go from here forever."

As the old chief spoke the last words the whole tribe uttered an ear-splitting shriek, then bowed their heads in silence. The squaws took the ashes from the fire and sprinkled them on the Indian graves. Then they all assembled on the high banks and sang a farewell song. An Indian song is indescribable, especially the farewell. Their drums were afterwards brought in to play and the old bucks beat a tom-tom while the younger ones joined in the pow-wow. A huge fire was made and the dancers circled around it for two hours. Then Pi-a-gic, who was a silent spectator, motioned the dancers to silence, and the dance closed. The people stood around the dying fire as if in meditation, then disappeared from view. They had performed the ceremonies and had gone. It was on this same historic and picturesque spot that the decisive battles between the Sioux and Chippewas were fought.



THE NEW MILITARY POST, FORT HARRISON, NEAR HELENA, MONTANA.

'Cause of yer aint I've got one outside here I catched myself, and I'll take you out after we get through eatin' and show it ter ye.'

"I thanked him and said I would be very glad to see it, as I had never seen one. After dinner, having still ten minutes to spare, we went to see the wildcat. It was in a rough wooden box with wooden bars, crouching as far back as it could get, with its eyes gleaming like coals of fire. When one of the men offered it a piece of meat on the end of a stick it made a spring that seemed as if it would break through the bars, but the stick had a sharp point that made it beat a hasty retreat, though not before it had secured the meat, over which it snarled viciously. Its owner told me he had brought it to the station to send it to a friend who kept a clubhouse, whatever that is, in Carson city. I asked him to tell me how he caught it, but before he could answer, the conductor called out, 'All aboard!' As the train got underway I looked back and saw my two friends flying across the country on their mustangs."

save the crooning of the wrinkled old woman who faced the sinking sun; the others sat with their faces toward the east. As the last of the glittering sun was fading from view a little papoose, at a sign from Pi-a-gic, brought a cone-shaped bark vessel filled with roots of cedar trees and dried grass and leaves from the graves near the old mission. This was lighted, and as the smoke and flames rose in the air the voice of the old squaw was raised to a wail. The assemblage soon took up the death-chant of the Indian—a weird, wild, uncanny sound, and doleful in the extreme. The chant was continued for fifteen minutes, when the leader beckoned an old man to her side. He was Sylvester, the chief.

The chanting ceased, and the old warrior addressed, in Chippewa, the small remnant of a once large band:

"The sun sinks and the mounds of our fathers are dark. The great White Father sends his son to us, and we move from their graves. Here we met and fought the Sioux; here our children learned of the Great Spirit. Peace is every-

Fort Harrison, Montana.

One of our most interesting illustrations this month is that of Fort Harrison, from a sketch by our special artist. This post, recently established by act of Congress, is now under construction. The situation chosen is in the Prickly Pear Valley, about three miles from the business center of Helena, near the State fair grounds. This will be one of the permanent posts in the West. The buildings are of brick, and when eventually completed will be sufficient in number and capacity to quarter an entire regiment. At first quarters for two companies only are to be erected. The post will probably be a regimental headquarters, and will be a very valuable addition to the business and social life of Helena. It is the policy of the Government to gradually establish large posts at centers of railway communication near important towns. Fort Harrison will afford a valuable market for the Missouri and Gallatin valleys, and will also be an attractive point for tourists over the Northern Pacific Railroad.

THE GOLD MINES OF BASIN, MONTANA

A Remarkable Net-work of Gold Quartz Veins on the Boulder River, Between Helena and Butte.

The fame of the new mines of Basin is just beginning to spread through the mining districts of the Rockies. Comparatively few people in Montana have an adequate conception of the importance of these discoveries and of the great possibilities of wealth for the State that lie in their further development. Nine miles west of the old county seat of Boulder is the new town of Basin, and now counting about six hundred inhabitants. It is situated in a little park-like opening in the mountains, through which flows the swift current of the Boulder River. The distance from Butte is twenty-seven miles and from Helena fifty miles. This busy town of wooden buildings, so new that their owners have not yet found time to paint many of them, is the center of one of the most remarkable net-works of gold-quartz veins existing anywhere in the world, which in its general character closely parallels the net-work of silver and copper veins that has made of Butte a city of 35,000 people. The discovery of these veins is not recent, but their great value for practical mining purposes was not demonstrated until the art of making concentrates out of low-grade ores had been perfected and the "Vanner" machines now in general use had been invented. These machines reduce six or seven tons of ore, as it comes from a mine, into one ton of concentrates, and thus by the aid of water and a little labor convert low-grade ore, not rich enough to pay to ship to distant smelters in its native condition, into a highly valuable product. The concentrates made from the ores of the mines near Basin are worth from \$150 to \$200 per ton at any smelter in Montana, and there is a good hundred dollars of profit in every ton shipped.

Fourteen or fifteen years ago a number of mines in this district were worked for free-milling ore and paid well until the chutes were down forty or fifty feet, when the ore became base. As there was no way to treat base ore at that time the developments were abandoned. From the old Boulder mine about \$80,000 of free-milling ore was taken out thirteen years ago; the Buster paid \$60,000 and the Lone Star and Deer Lodge were good mines. Now it turns out that the old-timers only scratched the surface of the wealth that lies in the mountain sides along the Boulder River and along the creeks of Cataract and Basin that flow into that stream near the new town. The big money in these veins is found below the water line when the ores, which are found in solid masses of gold quartz, carrying some silver and copper, become wide fissure veins. A lead which has a width of four feet when first struck is very likely to steadily widen out until at a depth of 150 feet it is eight feet wide and all good ore from wall to wall for concentrating, running in value from \$5 to \$100 to the ton as it comes out. Claims have recently been taken on the strength of the remarkable success of the Hope, Katie and other mines, all along the Boulder, for a distance of four miles east and six miles west of Basin and up Basin Creek for twenty miles and up Cataract Creek for eighteen miles, so that the whole district is now covered with locations like a patch-work quilt. There are probably to-day no less than

three hundred claims upon which shafts or tunnels have been sunk which have struck ore veins, the veins varying in thickness from six inches to three hundred feet. Of course all these claims will not turn out to be mines, but it is a remarkable fact that not one has yet been worked that has not proved to be a success. Three or

four good mines make a populous and prosperous camp. From present indications there will be fifty at Basin as soon as capital is attracted to the district to develop the best of the prospects already opened down to paying veins.

The best developed mine in the district is the Hope, just west of Basin. It has a two-hundred-foot shaft and about seven hundred feet of levels. Its vein varies from eight to twenty feet in width and it is running a 120-ton concentrator. This mine is owned by Helena and Butte people and is a great property. The Katie adjoins the Hope on the east and is working on the same vein. It is down two hundred feet in solid ore—twenty-five feet wide of gold and copper. A 150-ton concentrator has just been put up. Several hundred feet of levels have been run. This valuable property is operated by Glass Brothers, of Basin.

The Obelisk is two miles east of Basin, on the Boulder River. It is running a fifty-ton concen-



VIEW UP BASIN CREEK, MONTANA—B. B. MINE TUNNEL HOUSE.



VIEW OF BASIN, MONTANA, LOOKING WEST.

trator on ore carrying both gold and silver. The Deer Lodge, two miles northeast of Basin, up Cataract Creek, is under lease and bond to the Montana Ore Purchasing Company, of which F. A. Heinze, of Butte, is manager. It made a great strike lately at the 150-foot level, the ore carrying 100 ounces of silver to the ton, \$60 of gold and nine per cent of copper. The Lone Star, owned by Samuel Melville, of Butte, is about half a mile north of Basin, on Basin Creek. Its shaft is down 120 feet and has struck a five-foot vein of ore, yielding \$25 in gold and 6 ounces of silver and concentrating six tons into one. The Saturday Night is under lease and bond to Mr. Hallihan, of Colorado. It is three miles northeast of Basin and has struck a 4-foot vein, at the depth of 120 feet, of gold concentrating ore, running from \$40 to \$50 to the ton. The Standard and Nettie, a mile east of Basin, are bonded to a Colorado company for \$35,000, which is driving a tunnel 200 feet to tap two veins of gold and copper ore. The Butte and Basin Mining Company, working a claim half a mile northeast of Basin, is, at this writing, down 50 feet and is just getting on top of a good vein. The Rose mine, one mile northeast of Basin, on Cataract Creek, is under bond to the Glass Brothers, who have a tunnel in 100 feet and have struck a five and a half foot vein of gold and copper ore. The Hope Extension, adjoining the Hope on the southwest, is operated by Butte parties, and is now cutting the vein with fair ore. The Homestake and Silversmith, owned by Patrick Mullins, of Butte, is so good a property that he has refused to bond it for \$125,000. The B & B., on Basin Creek, half a mile from the town, is shipping ore from a tunnel 160 feet in. The Carrie and Last Chance, half a mile south of Basin, are under bond to Helena parties for \$70,000 and are developed to 150 feet, showing large bodies of low-grade ore.

These are the mines on which there is already considerable development. A list of good prospects that have struck veins of paying ore and that promise to become paying mines would be a very long one. A few of the best known of these prospects may be mentioned. They are the Eureka, Custer, Bergman, War Eagle, Fairview, Forest Hill, Lookout, Dooley, Speculator, Mary K., Uncle Sam, Louisiana, President and Apache Chief. An excellent authority on the entire Basin group of mines states that there are at least 300 prospects that have struck veins of ore which will pay to work below the water line. Two or three of the working mines are cited that paid off their bonds with the ore from their development work, before they had fairly got in shape with tunnel and cross-cuts for the best steady results.

Enough has been said here to show that there is a very remarkable gold district lying around the new town of Basin, and that this district is destined to rank soon among the great wealth producers of the world. The present developments were begun three years ago, but it was not until last year that much attention was attracted to the region in Butte and Helena. Of course the present business stagnation all over the country operates to retard enterprise here. In ordinarily good times there would be three or four times as many producing mines as are now operating near Basin. The progress of the district cannot long be seriously hindered, however, even should the hard times continue for many years. With the new concentrating apparatus these large bodies of low-grade ores are so evidently valuable in the eyes of experienced mining men that money will be procured for the opening of mines and the building of concentrators. It is safe to say that nowhere in the entire mining region of the Rockies, from the British line to Mexico, are there such good opportunities for putting money in mines without risk of



THE HOPE MINE AND CONCENTRATOR AT BASIN, MONT.

loss and with excellent chances of large profit, as are now to be found around Basin, Montana. The very moderate cost of opening and working mines is one of the strong features of the district. Most of the veins can be reached by tunnels run in from mountain sides. Wood and water, important elements in all mining operations, are abundant. With a small capital a mine can be bonded and developed up to the point of becoming a good producing property. Of course a large mine should have its own concentrator, but there will soon be one or more custom concentrators in the district and companies operating with moderate capital can have their ores concentrated for about \$2 per ton and employ all their means in their mining work. With a fair ore body a year's work will pay off a bond and earn all expenses besides, so that the owners will afterwards be "on velvet."

A very pretty town-site was chosen for the new town of Basin. There is level land enough in the basin which gives the name to the place and along the banks of the Boulder, above and below and in the narrow valleys of Cataract and Basin creeks, to accommodate twenty or thirty thousand people in case the developments of the district should in the future make a considerable city here. A reasonable expectation of immediate growth is that there will be four or five thousand people in and around Basin within two years. At present the place is only a new and bustling mining camp. There will be a good hotel open by September. In the meantime visitors who do not find suitable accommodations in the place can make their headquarters in Boulder, nine miles distant, where there are two hotels, or can stay at the Boulder Hot Springs, taking a train up to Basin in the morn-



THE KATIE MINE, BASIN, MONT.



THE OBELISK MINE AND CONCENTRATOR, NEAR BASIN, MONT.

ing and returning in the evening. Butte is only twenty-seven miles distant and people stopping there can leave at nine in the morning, have the whole day from eleven to six at Basin and get back for supper. Basin is on the main line of the Montana Central Railroad, which runs two trains a day each way between Helena and Butte, and is also on a branch of the Northern Pacific, on which one train is run daily each way, starting in the morning from Helena, going to Jefferson, Wickes, Boulder, Basin, the Boulder Hot Springs and Elkhorn and returning to Helena in the evening. The excellent facilities for travel and for the transportation of concentrates by competing lines of road are of great importance in the development of the district.

The site of Basin is owned by the Basin Townsite Company, of which William H. Nichols, of Butte, is trustee and manager. It is not the purpose of the company to push the town in a speculative way. They look forward to the steady development of the mining district and they

know that the growth of the town will be a necessary feature of that development. They are not inviting speculators to buy their lots, but they welcome all improvements that are warranted by the business which is sure to center in Basin. A newspaper has already been established that is crowded every week with information about the progress of the district, and a bank has been opened. A year ago there were not fifty buildings in the town; now there are about three hundred and the music of hammers and saws at work on new structures is constantly heard. With scores of bodies of paying ore known to exist in the immediate vicinity of the place; with a number of mines now at work and producing steady profits; with several concentrators in operation and with others under construction; with a favorable situation central to all this activity, on a fine stream of water and on two lines of railroad, the future of Basin as an important mining center is beyond any possibility of question.

E. V. S.

MONTANA FOR AGRICULTURAL SETTLEMENT.

No State in the Union offers better attractions to day for settlement by intelligent, enterprising farmers than Montana. The agricultural resources of this magnificent mountain State were largely overlooked by reason of the chances for sudden wealth offered by mining the precious metals during the early years of the occupancy of the country. In later years a great tide of emigration flowed across Montana in search of homes on the Pacific Coast. Very few of this moving army of home-seekers gave any attention to the rich valleys through which they passed on their way to the lands beyond the Rockies. Mining gold and silver, copper and lead is still and will always remain the leading industry of Montana. It produces about \$35,000,000 of gross income every year. Because of the existence of this enormous industry within her borders, as well as because of the productivity of her soil, and her agreeable and invigorating climate, Montana holds out great inducements to farmers, for the mining towns and camps are heavy consumers of every kind of food and forage the farmer has to sell. Montana does not nearly feed her own people. About five-sixths of all the pork, bacon and lard they consume is brought from the East. Nearly the same proportion of the butter consumed comes also from the East and about all the cheese. Eggs are also imported and a good deal of garden stuff and small fruits. Of flour Montana buys as much from the East as she grinds in her own mills. No one can contend that farming is overdone in a community which brings in from distant States most of its food over an average rail haul of 1,000 miles, or that it is likely to be overdone in the present generation.

IRRIGATED AND IRRIGABLE LANDS.

The greater part of the area of Montana does not receive enough rainfall for farming by the ordinary Eastern methods. Irrigation is necessary. The exceptions to the rule consist of a few small valleys of high altitude and of considerable tracts on the foot-hills of the mountains lying adjacent to the timber. The most important of the valleys now well irrigated is that of the Gallatin, where there is one main canal forty-seven miles long and numerous small canals and where most of the level land is already under ditch. Lands in this noble valley, with perpetual water rights, can be bought for about \$25 an acre. This is a great country for wheat, oats and barley. Improved farms with buildings cost from \$30 to \$50 an acre. Large areas of bottom land lying along the Missouri River between the Three Forks and the Gate of the Mountains are irrigated from that river and devoted to general farming. The Prickly Pear Valley, adjacent to Helena, gets its water for its fields of grain from Prickly Pear Creek and supports hundreds of prosperous farmers. Another extensive valley is that of the Bitter Root, in Western Montana, which is nearly 100 miles long. It contains a number of small irrigating canals and offers excellent opportunities for additional enterprise in the same line. This valley is a good fruit-raising country. The Missoula Valley, below the city of the same name, is irrigated from small streams for about ten miles of its length. A flume and canal carries water from the Hell Gate River over the broad bottom lands opposite Missoula above the junction of that river with the Bitter Root. Here are attractive openings for gardeners and fruit raisers. The Deer Lodge Valley, immediately west of the Main Divide of the Rockies, is one of the oldest and best settled farming districts in the State and is specially noted for its heavy crops of oats. In the Beaverhead Valley is a large community of suc-



THE LONE STAR MINE, BASIN, MONT.

cessful farmers. At Horse Plains, near the Idaho boundary, and on the main line of the Northern Pacific, the settlers have taken out small canals that cover several thousand acres.

East of the ranges of the Rockies irrigation is much newer for the reason that the first farming was naturally undertaken near the gold and silver-mining camps, and the mines are in the mountains. Along the Upper Yellowstone excellent progress has been made in recent years in redeeming lands for cultivation by the joint efforts of farmers in constructing ditches as well as by the enterprise of a few corporations. Above Billings thirty miles of bottom are under canals and most of the land is tilled. In Yellowstone County, of which Billings is the county seat, are now 286 miles of main irrigating canals. An important canal taken out of Tongue River near Miles City irrigates about ten miles of the valley of that stream and comes out upon a broad stretch of rich land lying along the Yellowstone. The warm summer climate of this region and its comparatively low altitude makes it particularly desirable for gardening and fruit raising. Two or three hundred families could advantageously locate at once on the lands watered by this canal. In the Judith Basin and in Northern Montana north of the Missouri there are a number of new and creditable canal enterprises.

Along the middle and lower stretches of the Yellowstone lie many broad areas of fertile bottoms that are sure to attract capital at no distant day in the construction of large canals. These enterprises will require a good deal of money, but they will give sure and permanent returns. A sound irrigation scheme is always safe and remunerative, for the reason that the water is the life of the land and when applied to the soil produces certain and large crops. There is no possibility of crop failure on an irrigated farm, and the yields of grain, grasses, fruit and vegetables are two, three and even four times what can be grown by the ordinary method of trusting to rainfall.

The Northern Pacific Railroad Company owns over 300,000 acres of irrigable lands in the valley of the Yellowstone and the lateral valleys of its tributary streams and will co-operate with enterprises for the reclamation and settlement of these lands. Inquiries should be addressed to William H. Phipps, Land Commissioner N. P. R. R., St. Paul, Minn.

IRRIGATION BY PUMPING.

There are many localities in Montana, particularly along the Yellowstone, where it will be profitable to irrigate small fruit farms, garden farms and fields of alfalfa and timothy with water pumped from the river. A steam exhaust boiler, costing about \$500, will irrigate about twenty acres and can be run by a boy with drift wood for fuel or with lignite coal cheaply mined in the neighboring bluffs. Another method of irrigating which is beginning to attract attention is by current wheels placed on flat boats anchored in the stream, and working pumps, which raise the water to a sufficient height to allow it to flow to a storage reservoir. In this way a farm can be brought under ditch at a moderate cost.

FARMING WITHOUT IRRIGATION.

The best locality in Montana to observe farming without irrigation is probably on the foot-hills of the Belt Mountains, on the eastern side of the Gallatin Valley, north of Bozeman. Crops of grain are not as heavy on these lands as on the irrigated lands of the valley, but the farmers save the cost and labor of irrigation. In the line of raising small fruits, such as strawberries, raspberries, currants, gooseberries, etc., the foot-hill ranchers excel all competitors. Nowhere else are fruits and berries grown in such perfection of size, flavor and keeping qualities.

The berries ripen much longer and very much later in the foot-hills than elsewhere, and the result is that the most luscious strawberries are often found in the Helena market late into September when they command a higher price than the early and poorly flavored spring products. It has also been demonstrated of late that wherever a southwestern exposure occurs in the foot-hills the chances are in favor of the growth of most excellent crabapples, together with plums, grapes, etc.

Cattle, horses, pigs, and domestic fowls thrive very much better in the foot-hills than they do in the valleys. Vegetables are much better in flavor and keeping qualities than when grown by irrigation. There are a number of other conditions that make the foot-hills most desirable for a rancher with small means. His cattle and horses have abundant range near at hand; his family is not exposed to the possible malaria from excessive irrigation; there is no alkali to eradicate from the soil; pure water is sure to abound in a mountain spring or stream; he is convenient to the mountains where any idle days may be spent in prospecting for the precious metals, coal or any of the many products native to the mountains, that may lead to immediate wealth. There are the pleasures of hunting and fishing, as a rule, within easy distance of the home; the flowers are brighter, the grasses are richer and better and usually of greater tonnage to the acre in the mountain parks than in the valleys. Settlers who are looking for good locations in the foot-hills can judge by the growth of grasses whether there is sufficient moisture for ordinary crops. The moisture comes in part from natural sub-irrigation from melting snow and from springs, and in part from the greater rainfall and the moister, cooler atmosphere than obtains in the valleys. The so-called foot-hill regions extend along the slopes of all the many ranges of the Rocky Mountain system and embrace many small basins or parks and numerous little valleys. In these regions the Northern Pacific Railroad Company owns a great deal of land which is offered for sale on the easiest possible terms and at low prices. The purpose of the company is to facilitate settlement and aid in the development of the resources of Montana.

MONTANA'S DESIRABLE CLIMATE.

Climatic conditions in Montana are much affected by altitudes and by the trend of the valleys in relation to the prevailing winds. As a general statement it may be said that the winters are milder and the summers cooler than in corresponding latitudes in the Eastern States. Another rule is that the farther west one goes in the State the more is the effect of the warm west winds felt, and consequently the less severe are the winters. Thus the rolling plains of Eastern Montana have a colder winter climate than the valleys of Western Montana. The summer weather is not excessively hot, and the nights are always cool. In fact, there is no part of the State where a blanket is not needed for comfortable sleep in the hottest weather. Spring opens early, and both the spring and the autumn months are generally characterized by the perfection of weather.

The wind is called the Chinook and blows from the Pacific Ocean. It is not usual in mid-winter for snow of considerable depth to disappear in a single night from the influence of a warm Chinook wind. The extreme low range of the thermometer is about the same as in Iowa and Wisconsin; but the average winter temperature is milder. The pure mountain air of Montana and the relatively small amount of moisture in the atmosphere makes the State a very desirable place of residence for invalids and people of feeble constitution who require a change of climatic conditions. In the early stage

of consumption, removal to Montana often effects a permanent cure. The stimulating effect of the atmosphere makes the circulation of the blood more active, and enables people to throw off many chronic ailments from which they have long suffered in the East.

FARMING IN CONNECTION WITH STOCK-RAISING.

Wherever the new settler may see fit to locate and open a farm, either with or without irrigation, he will find large areas of open bunch-grass range near at hand where he can pasture his stock without rental or ownership of the grazing ground. This is an important advantage. The upland ranges, which are too dry for farming without irrigation and lie too high to be reached by ditches from the streams, are likely to remain unfenced for many years to come and in this condition are common pasture for the stock of the settlers in the neighboring valleys.

FUEL AND FENCING.

The timber on the Government lands on the mountain slopes is free to the settler to use for fuel, fencing and buildings. This timber is mainly pine and spruce. Along the margins of all the streams grow belts of cottonwoods. Seams of coal are worked in a number of localities.

RAILWAY FACILITIES.

All the most desirable districts for settlement are reached by the main line of the Northern Pacific Railroad or its branches. Settlers can go out very comfortably in tourist sleeping cars, which are provided with porters, have ranges for cooking and are fitted up with good mattresses, pillows and curtains—a little plainer than a regular Pullman, but clean and good. Second-class tickets are good on these sleepers and the extra fare for their use is only fifty cents a night. From St. Paul to Helena, the central city of Montana, the time is about forty hours.

OPPORTUNITIES FOR DAIRYING.

Special attention is called to the numerous excellent opportunities in Montana for opening dairy ranches. The State still buys from Iowa and Minnesota more than half the butter it consumes. A practical dairyman will find no difficulty in securing an admirable location on a river or creek, where he can irrigate enough bottom land to give him abundance of hay, where he can have running water for his milkhouse from a cold stream fed by melting snows, and where he can put up a "bank" barn for warm winter shelter for his cows. If he will make a high grade of butter he can sell it for a high price in Butte, Helena, Missoula and other towns.

THE VELOCITY OF ARCTURUS.—Mr. Serviss, in the *New York Sun*, says: Arcturus, which exceeds our sun several thousand times perhaps in light-giving power, is apparently a runaway in the universe. As far as is known at present, Arcturus is both the largest and the most swiftly moving body in the stellar heavens. Its calculated velocity is no less than 375 miles in a second, or 32,450,000 miles in a day! The direction of its motion is such that it approaches the earth at the rate of 3,400,000 miles a day. But even if it were rushing at us in a straight line, 85,000 years would elapse before the encounter could take place. Nobody has been able to guess how Arcturus got started at its present rate of traveling, or where its journey will end. If it is only a gigantic visitor to our system of suns, then it will pass through the visible universe, and in the course of millions of years disappear from it. And if any member of our system should, through too close approach, become a satellite of Arcturus, it would inevitably be borne away a prisoner into the unfathomed and, by human eyes, unseen depths of illimitable space.



THE NORTHWEST MAGAZINE

Entered for transmission through the mails at second-class rates.

E. V. SMALLEY, — EDITOR AND PUBLISHER.

BUSINESS ANNOUNCEMENT.

THE NORTHWEST MAGAZINE is published in St. Paul, Minn., on the first of each month.

ST. PAUL OFFICES: Bank of Minnesota Building, Sixth and Jackson Streets.

BRANCH OFFICES: Chicago, 210 S. Clark St. New York, Mills Building, 15 Broad Street.

THE TRADE is supplied from the St. Paul office of THE NORTHWEST, and also by the American News Company, New York, and the Minnesota News Company, St. Paul.

ADVERTISING RATES: Per agate line display, 25 cents; per inch, \$3.50. Discounts for time contracts. Reading notices, 50 cents per line count.

SUBSCRIPTION PRICE, \$2 a year; in advance.

NEW SUBSCRIPTIONS can commence at any time during the year.

THE POSTAGE to all parts of the United States and Canada is paid by the publisher. Subscribers in Europe should remit fifty cents in addition for ocean postage.

PAYMENT FOR THE NORTHWEST, when sent by mail, should be made in a Post-office Money Order, Bank Check or Draft, or an Express Money Order. When neither of these can be procured, send the money in a Registered Letter. All postmasters are required to register letters whenever requested to do so.

DISCONTINUANCES.—Remember that the publisher must be notified by letter when a subscriber wishes his magazine stopped. All arrearages must be paid. ALL LETTERS should be addressed to

THE NORTHWEST MAGAZINE,
ST. PAUL, MINN.

ST. PAUL, JULY, 1894.

AN ERA OF GOLD PRODUCTION.

Several months ago THE NORTHWEST MAGAZINE stated the fact that in all the mineral zone in the mountains of the western portion of the country, the gold-bearing leads or veins far exceed in number the lead-silver deposits; and that if capital and inventive genius had given equal money and mind to development and treatment of gold ores that has been given to the silver, the gold mines and products of this country would now represent far greater value than has resulted by the unprecedented development of the lead-silver mines. The increased gold production in the Western States and Territories already proves the assertion made; and just now the one demand is for gold properties. Coupled with this is the sudden attention of inventors toward improved methods of gold extraction and gold saving. The great house of Frazer & Chalmers, of Chicago, that builds probably two-thirds of the mining machinery used in the world, is out with pamphlets and circulars calling attention especially to its improved methods and machinery for use in the gold districts; Gen. Don Carlos Buell has recently perfected a machine for extraction of the precious metal from the auriferous magnetic iron sands of the Pacific Coast, and a Milwaukee concern, The Bucyrus Steam Shovel and Dredge Co., is turning out a huge amalgamator which is guaranteed to handle (with very little water) at least a cubic yard of gravel per minute, and a company was recently formed in Montana that proposes to utilize a new vacuum dredge that will explore the bed-rock of the Snake and Missouri rivers. Several electric amalgamators have been patented within a few months, and suddenly, as it were, innumerable devices for gold-ore treatment have come to the attention of miners. The era of gold production in the United States has dawned.

BUTTE.

The big mining town of Butte, which clings to the western slope of the Rocky Mountains like a huge black spider, with long legs of suburbs thrown out in every direction, has almost escaped the pressure of the hard times. In spite of the decline in silver which has closed several of her best mines, she continues to be a busy hive of well-paid labor. Her copper production is greater than at any time in her history; some of the large silver mines are able to keep in operation by reason of the gold which their ores contain and there is a good deal of mining in a small way done by working miners who lease silver veins and take for their labor what they can get at the smelters for the seventy-five per cent of the ore which is their share. It is said that the pay-roll of the "camp," as old-timers still call the city, is almost as great as it was in the flourishing times, five or six years ago. The old rate of wages is still maintained for mining labor. But rents have declined twenty per cent and goods and provisions are about that much lower than they were in the boom period, so that the purchasing power of the Butte workingman's wages is correspondingly augmented.

There is only one draw-back to this pleasant picture of prosperity. The fame of Butte as an oasis of well-paid labor in the midst of the national desert of reduced earnings has spread far and wide and the city has become a Mecca for men out of a job. The friendliness shown to the absurd Coxey movement by the Butte workingmen has attracted gangs of Coxeyites from the further West. A few of these wanderers are honest fellows, willing to work, but the majority of them are the old hobo brakebeam riders, who now find that they can get victuals and beer by wearing Industrial army badges. Butte has thus far cared for all these shabby guests with unstinted hospitality. She got rid of over three hundred of them lately. After they had been captured by the soldiers and tried at Helena for stealing a train they were sent on to Benton by the Helena people, with money to build boats for a voyage down the Missouri. Their places at the free-lunch counters and at the back-doors of generous, food-dispensing citizens were soon filled, however, by new arrivals from Seattle and Spokane. The burden of supporting this horde of robust consumers who produce nothing is becoming too heavy to be borne much longer with patience even by sympathetic and open-handed Butte. If there is no way to get rid of them they should be set to work paving the streets with the granite which crops out of the neighboring mountain sides.

SOME RESULTS OF HARD TIMES.

There is little hope now of a speedy change from hard times to good times. The hard times appear to have come to stay until they are worn out by patience, economy and industry. They are not going to vanish like a thunder cloud from a summer sky, leaving behind the sunshine of completely restored prosperity. If we are wise we shall expect no miracle to happen. We must adjust our affairs and our plans to a probable continuance for several years of a condition of more or less depression. This is the lesson of previous financial panics and there is no reason to think that we shall now enjoy an exception to what appears to be the rule of history. Good times will return so gradually, year by year, that we shall not know when we turned the corner of adversity.

In adjusting ourselves to this change that has come upon us we should remember that courage and cheerfulness are the necessary forerunners of prosperity and we should all stop croaking. There is just as much wealth in the country as

ever, and just as much brains and muscle. Business is suffering mainly from a mental condition and this must be outworn. Most diseases of the body are self-limiting and this mental complaint of general depression will in due time be thrown off if we do not aggravate it. In the meantime everybody should get to work for whatever he can earn. If a man cannot get a job for the wages he thinks he ought to have let him take what he can get, assured that half a loaf is better than no bread and that his earnings will improve as times get better. No sympathy should be shown to the cranks and bobos of the miscalled "Industrial army" who set out to go to Washington at other people's expense and refuse to accept wages that will at least provide them with food, clothing and shelter. Business men should push their affairs with energy and be content for the present with the smallest margins of profit. Farmers should raise all they can and remember that nothing will be gained by sitting on the fence and grumbling at low prices. There is only one road now to prosperity and that is the narrow road of economy and industry. The highway of speculation, which used to look so pleasant, is badly out of repair and is for the most part impassable. Money loaners must understand that high rates of interest belong to the past era. With the present low prices of products of all kinds neither farmers, manufacturers nor merchants can pay the old rates for capital borrowed to carry on their occupations. Small profits are the rule in all lines of business and the capitalist must share in the general reduction. Wages have come down, rents have come down, profits and prices have come down and there is no reason why interest should not come down like everything else. Many of the railroads are forced to re-organize so as to reduce their obligations, and a multitude of other enterprises are going through the process of scaling down the principal or interest of their debts. Holders of mortgages on farms and dwellings ought to be willing to reduce their interest rate and thus do their share towards putting the country on the road to better times.

AN IMPORTANT LAND DECISION.

A vexatious question, involving the title to a considerable part of the lands lying within the limits of the Northern Pacific grant in Montana and Idaho, was settled, in a measure, a few weeks ago, by a decision of the Supreme Court at Washington. The question was as to the true intent and meaning of a clause in the granting act which excepted lands containing minerals other than coal and iron, and litigation has been going on for four years, on a test case originating in Helena and entitled "The Northern Pacific Railroad Company versus Richard P. Barden, et al." It was claimed by the railroad that the clause excluding mineral lands from the grant applied only to lands known to contain valuable minerals at the time of the definite location of the road; that the grant was one in *praesenti*, covering all the odd sections within forty miles of the line and that no subsequent discoveries of minerals could invalidate the title of the company. On the other side it was maintained that the exemption of mineral lands was a continuing one, extending at least to the actual patenting of land to the company. On May 20, 1888, the defendants in the action discovered and located several veins of mineral bearing ore in the vicinity of the Broadwater Hotel and natatorium, in Lewis and Clark County, and commenced mining operations upon the same, September 9, 1890. The plaintiff commenced its action of ejectment against defendants, alleging that its grant, general and definite location of its road, and the completion thereof, were all prior in time to the discovery and location of said mining claims by the defendants. The case was

tried before the Hon. Lorenzo Sawyer, United States circuit judge, and the Hon. Hiram Knowles, United States district judge, for the district of Montana, and by a divided court. Judge Sawyer being in favor of the plaintiff and Judge Knowles in favor of defendants, judgment was rendered for the railroad company and against the mineral claimants. Under the law organizing the Court of Appeals, there was a saving clause as to cases then pending which enabled the case to go by writ of error directly to the Supreme Court of the United States for review.

Justice Field delivered the opinion of the Supreme Court and Justices Brewer, Gray and Shiras dissented. The fact that three of the justices sustained the contention of the railroad company shows that the question was one with two sides and that the ablest judicial minds differ as to the true construction of the law. It ought to put an end to a good deal of hostile criticism of the railroad company based on the erroneous idea that the company, in the mineral lands dispute, was attempting to get possession of land to which it had no reasonable show of title. In the early stages of the controversy there was a good deal of feeling in Montana and a State organization was formed for the purpose of opposing the claim of the railroad. Out of the agitation grew a bill which was introduced in Congress by Hon. Thos. H. Carter, providing for an immediate examination by the Government of the odd sections of land lying in mining districts within the limits of the railroad grant, to determine whether or not they contain precious metals. This bill has been revived by the Montana representatives who have succeeded Mr. Carter and is now being pressed for action by Congressman Harter. It should become a law. As fast as lands are surveyed the question of whether they contain precious metals and therefore are excluded from the grant, or do not contain precious metals and therefore belong to the railroad company, should be officially and finally determined; otherwise the settlement and development of Montana and Idaho will be seriously retarded. The process of issuing patents is a slow and tedious one and very few sections of railroad land have actually been patented to the company. The practice of the company has always been to offer its lands for sale as fast as they are surveyed. The Supreme Court decision will tie up nearly the entire grant for a distance of five hundred miles unless there can be an early examination for minerals or unless the old operation of patenting can be greatly expedited. The company can convey no title by warranty deed in any part of the immense region where there is a possibility of the future discovery of gold or silver. It can only quit-claim the odd sections pending the future action of the Government to determine whether or not they are likely to contain valuable deposits of minerals.

SINCE the low price of silver has compelled proprietors to pay some little attention to gold-bearing ores and gravels, there has been an almost wonderful increase in gold production in Montana, Idaho and Colorado. Mr. Wheeler, the late United States Assayer in charge at the Helena office, states that the receipts of both gold dust and bullion has greatly increased of late, and that the output for the year bids fair to be several million dollars more than it was last year. The general business situation in Montana is certainly improving rapidly, and it is equally certain that the improvement is due mainly to the increased gold production.

THE raising of alfalfa on irrigated land along the Yellowstone River is becoming an important industry. Three crops are cut during the summer and each crop will yield two tons to the acre.



THE Trades and Labor Assembly of Butte, an organization composed of delegates from the various trades unions of the place, did me the honor to appoint a committee to call upon me, when I visited that city last month, for the purpose of expostulating with me on certain views concerning the wages question published editorially in this magazine. I regret that I had left Butte before I was apprised of the appointment of the committee. The opportunity to hear from intelligent workingmen their arguments in favor of the position taken by the Miners' Union in regard to wages and the rights of organized labor was one that I am sorry to have missed. I hope before long to be again in the busy city of mines and smokestacks, which is to a special degree the home of highly organized labor, and I shall expect then to be favored with another call from the committee. The position of the Union, as I understand it, is that no man in Montana or Idaho shall work underground in a mine for less than \$3.50 a day, although hundreds of men are idle in those States who would be glad to work for less wages and although a number of silver mines are shut down because their owners cannot pay the \$3.50 without losing money. Furthermore it is the claim of the Union, I am informed, that its members have a moral right to intimidate and threaten with personal violence any miners who, failing to get employment at \$3.50 a day, accept work at lower wages. This claim rests upon a supposed necessity of protecting the established Union rate. The Union men fear that if lean mines were allowed to work at \$2.50 or \$3.00 a day the rich mines that can well afford to pay \$3.50 would speedily reduce wages. They are not willing to take into account the fact that \$2.50 will buy more food, clothing, fuel and luxuries than \$3.50 did in the flush times of silver-mining when the present wage standard was established. They are determined to keep the \$3.50 rate in spite of the general depression and the universal decline in wages, incomes, profits and prices, and regarding the present attitude of capital and labor towards each other as a state of constant war, they believe themselves justified in resorting to force to maintain their position. This, I think, is a fair statement of their attitude. If the question were simply one between money-making mine owners and poor laborers I should certainly sympathize with the latter, but the real question is whether a large number of industrious miners shall be forced to remain idle and to depend upon charity because the mines which formerly employed them cannot be worked at the old wage-rate of \$3.50. It seems to me that the best way for all concerned, for the prosperity of the State and for the permanence of the Union, as well as for the good of the idle and despondent miners, would be to let every unemployed man go to work wherever he can get living wages, without menace or interference, and thus tide over the hard times.

A CATTLE man, whom I met on a train near Billings, argued that the sheep industry has been a detriment to Montana and that the State would have more people and more taxable property today if there never had been a sheep on the ranges. He maintained that the sheep men are mostly in an embarrassed condition financially, while the cattle men are well fixed. No bank in Montana,

he said, has lost a dollar on the cattle men, but loaning money to sheep men has proved a precarious kind of investment. Then he repeated the familiar story of the sheep destroying the grass on the ranges by eating it down to the roots and trampling the roots up with their sharp hoofs. When the sheep become numerous the cattle men must get out with their herds. The best grazing counties in the State are now occupied by sheep to the partial or entire exclusion of cattle. These counties lie on the eastern side of the mountains—Teton, Choteau, Cascade, Meagher, Fergus, Park and Yellowstone. My informant is an experienced and sagacious stockman, but no doubt some allowance must be made, in weighing his statements, for the old-time and deep-rooted prejudice of the cattle men against sheep. Wool-growing will certainly hold its place among the industries of Montana in spite of anything Congress may do with the tariff, and the industry will in time become so systematized that the ranges will not be eaten off beyond the certainty of being renewed by fresh grass each year. The cattle men are well organized in round-up associations but the sheep men are Ishmaelites—every man is for himself. Each looks with hostile eyes on the invasion by a neighbor's flocks of the range he has been accustomed to run his sheep upon, but his only remedy is by reprisal. He drives his flock to the choicest part of his neighbor's territory. There is no way of defining what range belongs to each by priority of occupancy, nor is there any method adopted to preserve the grass by limiting the number of animals to be pastured in a given district. The sheep men ought to organize for mutual protection and benefit.

NEXT day I met Editor Becker, of the *Billings Gazette*, who gave the other side of the sheep question. The sheep are owned, he said, by settlers who make permanent homes for their families near the range where their flocks feed. They buy all their supplies in the Montana towns. The cattle are for most part owned by men who live in Chicago, New York, or other places in the East, or in European countries. All the money made from sheep stays in the State; most of the money made from cattle goes out of the State. The supplies for the cattle ranches are bought at wholesale in Chicago. Since sheep have taken the place of cattle on a considerable part of the range country east of the mountains, the little valleys along the streams have been taken up by settlers, who raise hay for winter feed for the flocks. The sheep men pay taxes on nearly all the animals they own, for the assessor can make a pretty close estimate on a flock by looking at it, but the cattle man pays taxes on as many head only as he chooses to give in to the assessor. His cattle are scattered over hundreds of square miles of country and the assessor cannot ride the ranges for months to make a search for the brands of each owner. In the division of the country between cattle and sheep natural conditions have governed. Sheep never go farther than five miles from water; consequently the well-watered region near the mountains has been occupied by flocks. Cattle require water but once a day and will go a long way for it, feeding as they go and return. Thus the drier parts of the State have become the home of the range-cattle industry.

WHILE the citizens of Helena were raising money to build boats and send the Butte contingent of the Coxey army down the Missouri River, provisioned for the voyage to Bismarck, a leading merchant sought out one of the captains of the idle host and after listening to the usual song about no work and going to Washington to demand employment from the Government, he said: "Now, I'll provide work for 150 of your men. I own a big stretch of placer ground near here. I know there is gold in it, for I have taken out \$800

myself. You select your men and I will furnish flour, bacon, potatoes, coffee and sugar enough to provision them for two months. I am sure you can make \$2.00 a day apiece and you can pay me what you make above that figure." The Coxey leader hesitated a moment—a little ashamed, perhaps, of the admission he was forced to make that his men did not want to work—and replied: "Well, the fact is the boys have got started for Washington and they are bound to go there. I could not persuade them to stop if I should try."

A NEW species of land-shark has appeared in the Rainy Lake district of Minnesota, where a good deal of prospecting for gold ore is going on. In this State the mineral laws of the United States do not apply, because when they were adopted it was not supposed by Congress that any precious metals would ever be found in our soil. The only ways of acquiring Government land are by homestead entry or by entry as "land chiefly valuable for timber or stone." When a prospector finds a vein of gold quartz he proceeds to enter the forty acres on which it exists in one or the other of these two ways. Suppose he makes a homestead entry. Along comes the shark, who files a contest, alleging that the land is not agricultural and that he desires to take it up for timber or stone. If the prospector has made the regular timber and stone entry, then the shark files a homestead claim on it. The next movement is for the shark to demand a round sum for withdrawing his contest. It is said that this noxious animal has his habitat in Duluth and is sent out by disreputable lawyers in that city. Wherever he comes from, he should be ducked in the lake and drummed out of the country.

CORRESPONDENTS of the St. Paul and Minneapolis dailies have given to their papers of late very good accounts of the Rainy Lake district. That gold quartz exists there on both sides of the international boundary does not admit of question. At one point on the American side a vein has been sunk on for about fifty feet which yields ore that averages \$72 to the ton and a ten-stamp mill is going up. People who know anything about mining will not need to be told that if there is a good vein of free-milling quartz that will yield from wall to wall ore that will pay that sum to the ton, the mine is a great fortune. It appears that the outcroppings of gold-bearing rock are mainly found on the islands in the lake and along the banks of the Seine River. The most comfortable route to these new gold fields is by the way of Rat Portage, which is reached by the Canadian Pacific from either Winnipeg or Port Arthur. At the Portage the traveler takes a steamboat which threads its way among the 13,000 islands of the Lake of the Woods and runs for eighty miles up the Rainy River to Fort Francis. At that frontier Canadian military post a smaller boat is taken for Rainy Lake City. The correspondents are ecstatic about the beauties of the lake and river scenery and praise the fertility of the farms along the route. It is certain that whether the gold discoveries develop a permanent industry or not they will serve to make better known a large district that invites farming settlement and that has hitherto been neglected by immigration because of its isolation.

A MERCHANT at Billings is the possessor of 85,000 elk-teeth. He has been gathering these precious molars from the Indians for many years and they probably represent the hunting spoils of many generations of the ancestors of the Crows of the present day. The merchant keeps his store of teeth in a safe-deposit vault in Chicago. He sets a high value upon them and does not intend to sell them until he can realize at least one dollar apiece. If the "Benevolent and Protective Order of Elks" continues to grow and flourish he

will no doubt be able to dispose of his treasure at the figure he has set, for almost every member of that order has an ambition to sport an elk-tooth on his watch chain as an insignia of the jolly society.

SNOW in summer is not an uncommon phenomenon in the high valleys of the Rockies. In Bozeman on the evening of the 10th of June there was a mild snow-storm which covered the streets and gardens to a depth of an inch. Next morning the sun shone warmly and in an hour or two the white mantle had vanished and it was full summer again. A traveler new to the country was surprised to hear the inhabitants express their delight at what seemed to him to be a most unseasonable bit of weather. "It will help the grain," they said. "With the rains we have had and with this flurry of snow the farmers will not have to irrigate as much as usual this summer."

I WAS in an Eastern Montana town which adds the word City to its name one Sunday last month and went to church to hear a young minister preach. He had lately arrived from some theological seminary in the East. In the course of his prayer he referred to the people of this "village." He probably did not know that the term village is hardly used at all in the West. Every hamlet is a town and every town is a city. What a good thing it would be, I thought, if we Western people could learn, as one of many lessons that these hard times are teaching, the wisdom of calling things by their right names and of abandoning all inflated and hifalutin' terms. Let us drop our foolish notion that we can make things big by calling them by big names. A place of one, two or three thousand inhabitants is no city; why call it so? A creek does not become a river by naming it a river, nor does a school become a university by the same process. How ridiculous to call a little second-class tavern the "Grand Central Hotel," or a tailor shop a "merchant tailoring establishment," or a millinery shop an "emporium of fashion" or a barber shop a "tonorial parlor," or some petty politician "our distinguished fellow citizen." There used to be a landlord in Idaho who advertised his house as "the only second-class hotel in the Cœur d'Alene Country." That man believed in calling a spade a spade. No doubt his truthfulness paid him. If I had found occasion to visit his mining village I should certainly have put up at his house rather than at any hotel calling itself first-class.

I AM acquainted with a man in Montana who owes a business success achieved rather late in life to a faculty for clear and vigorous letter-writing. He arrived in one of the Yellowstone towns eight or ten years ago with about fifty dollars as his entire capital. He bought an old desk for six dollars and rented desk-room in an office for five dollars a month and went to work writing letters to land owners, stock men and others, offering his services as agent and broker. His letters were so practical and bore such an appearance of sagacity and sincerity that people began to employ him to look after their interests. He served his clients and customers with diligence and fidelity and is now worth thirty thousand dollars in good property. The remarkable part of the story is that the man had already reached an age, at the time he began this career of prosperity, at which most men commence to decline in vigor and business capacity.

DIFFERENCE in business management is generally the cause of success or failure. Especially is this true in mining. Some years ago the famous "Spotted Horse" mine was an unqualified failure in the hands of a management that is said to have expended over a quarter of a million of dollars to prove that the property was worthless. Now the same mine is turning out greater pro-

fits than any gold producer in Montana, and is said to have cleaned up \$100,000 during the month of May. The "Gem" mine near Wallace, Idaho, is another illustration of competent management. While all or nearly all the "big" mines of the Cœur d'Alene Country are shut down the "Gem" still turns out its regular profits notwithstanding that it is a lead-silver producer—and of low grade at that. But in the hands of competent management profitable work continues while many much larger, and supposed to be more valuable mines are idle.

INCREASING ACTIVITY IN GOLD MINING.

One of the surest indications that Montana prospectors are now turning their attention almost entirely to the discovering of gold-bearing leads is in the fact that the assayers in all the towns report that about 80 per cent of the samples now brought them for assay are gold-bearing ores.

THE NORTHWEST MAGAZINE has several times stated, in accurate knowledge of the mineral zones of Montana and Idaho, that the gold-bearing deposits throughout that region were far more numerous than were the lead-silver leads; and now a proof of the statement comes in the fact that the assayers generally all through Montana are receiving more samples for treatment than they ever received in any previous year. This means that more leads are being discovered than usual, and, therefore, that the gold-bearing veins are, as has been claimed, most numerous. The various county recorder offices also show that more locations are being filed this year than ever before; and the names given the locations (a sure indication) show them to be mainly gold-quartz leads.

There has never been a time in Montana's history when Eastern and foreign capital made so much inquiry for mining investment as now, —indicating that gold properties are in active demand.

AN ENTOMOLOGIST'S VIEW.

A barren country surrounds Miles City, the center of the great grazing territory of Eastern Montana, a country of prairie and Bad Lands, with little verdure other than that on the immediate border of the rivers and in the creek bottoms. Here a lover of groves and forests must be content with a variety of trees that might easily be enumerated on his ten fingers, and but few of even these. Cottonwoods, broken and scrawny, are the only trees of large size near the city, but as one penetrates the country to the heads of the Yellowstone's many tributaries, he meets with ash, elm, box-elder and willows, all native varieties, and differing somewhat from the trees of the Eastern States.

In the Bad Lands and in the hilly sections are pines and cedars also, but the majority of our country is vast prairie, grass-clothed, but bare of tree or shrub (the ever-present sagebrush excepted) and parched by the sun from July until winter.

What limited amount of shrubbery occurs is also confined to the water-courses. We have our native choke-cherry, wild rose, plum, willow, snowberry, buffalo berry, greasewood and sagebrush, a meager list indeed, when compared to the hundreds of shrubs and bushes abounding in most Eastern localities. All vegetation, without it may be grasses and wild flowers, occurs with us in but the most limited variety. We have no woods, no swamps, no hedges. What wonder then that the entomologist's hopes are saddened as he realizes that a corresponding dearth exists among his favored and busy tribes!—C. A. Wiley in *Entomological News*.

USEFUL INFORMATION

Bill Nye's Opinion of a Postoffice Money Order.

Here is Bill Nye's opinion of a postoffice money order, and the red tape it requires to cash it:

"I would like to see a good postoffice where a man can go and present a money order without being indicted by a grand jury before he can get away," says he. "I believe, generally, that a man who leads a good Christian life ought not to be jumped on and trod to the earth just because he has presented a money order for payment. We are all liable to make mistakes. I presented a money order once, thinking that the office was as eager to pay an order as it was to sell me one; but I was young then,—had seen very little of the world,—anybody could fool me with a kind word then; now I have my remittances sent me by freight, inside a joint of gaspipe, and do not have to wait so long."

Since Mr. Nye acquired the above experience express money orders have been introduced, and the rapidity with which they have come into general use is remarkable.

The convenience of the money order system of express companies is perhaps best illustrated in the *fac-simile* of form in use by the Northern Pacific Express Co. shown on this page. In this form not only can the amount of the order be collected at any express office in the United States, but at certain fixed places named in the orders, viz: The American Exchange National Bank of New York, the First National Bank of Chicago and the Merchants National Bank of St. Paul. This definiteness of payment at three of the principal cities of this country enables the person entitled to the money to obtain it without difficulty at any point, whether near or remote from an express office. In fact, to say that the express company becomes your banker and enables you thus to issue checks in the same form as those in use by banks, is not an exaggeration, but an every-day experience; and if this is not overlooked when taxes, bills, dues, etc., are to be paid, or money remitted for any purpose in any direction, the advantage of an express money order over a bank check or draft becomes apparent.

The European feature of the business is a most important one. Provision is made for the cashing of orders throughout Europe at fixed rates printed on the orders. A little reflection will lead the experienced foreign traveler to appreciate the advantage of these forms over the ordinary letters of credit and other means of rendering money available in foreign countries.

Money orders are sold and paid at all offices of the Northern Pacific Express Co., during business hours, from one cent to fifty dollars, and there is no limit to the number of orders sold to any person; moreover, the difference between business hours of an express office and those of a bank or postoffice is worthy of note. Purchasers are not required to fill out blank applications, the methods being so simple that a child can buy an order. This is the only system of sending money through the mails that gives a receipt which can be kept by the purchaser. In case orders are lost, delayed, stolen or destroyed, this receipt insures against loss. The amount of the order will be refunded to remitter or payee at any time, without

delay, inconvenience or additional expense, on execution of a bond of indemnity. Orders are negotiable by indorsement and can be used as exchange, payable at over 15,000 places in the United States, Canada and Europe. What other way of remitting money gives such feature of exchange with such absolute security, simplicity, economy and convenience? Orders are often deposited and handled through banks the same as checks and drafts, being redeemed through bank clearing houses in all the principal cities of the world.

The express companies of North America cover the country as completely as the postal service, and the chief comparative advantages of express money orders lie in their interchangeability. They are cashed on presentation at all offices of the American, Adams, United States, National, Southern, Wells-Fargo, Pacific, Great Northern, Canadian and other express companies.

RATES.—For orders payable in United States, Canada and Europe:

Not over \$5.....	5 cts.	Not over \$50.....	18 cts.
Not over 10.....	8 cts.	Not over 60.....	20 cts.
Not over 20.....	10 cts.	Not over 75.....	25 cts.
Not over 30.....	12 cts.	Not over 100.....	30 cts.
Not over 40.....	15 cts.		

Picturesque B. & O.

There are many roads from Chicago to Eastern cities and each can make some claim to special attractions for the tourist. Of the Baltimore & Ohio it can be said that no competing line surpasses it in the beauty of natural scenery, while it has two advantages peculiarly and exclusively its own—it is the only road passing through the city of Washington, and it is also the only one traversing a region rich in memories of the Civil War. From the crossing of the Ohio River near Wheeling all the way to Washington, there is hardly a mile of the B. & O. that has not a history in connection with skirmishes, guerrilla raids, encampments or pitched battles. This makes it the favorite route of old soldiers. Among the passengers on almost every train you will notice gray-haired veterans identifying the localities where they marched, bivouacked and fought. The historic interest increases as you go eastward. Once over the Cheat River Mountains and on the Upper Potomac, there is hardly a station whose name will not arouse memories of the war. What old soldier is there, no matter whether he wore the blue or the gray, whose blood is not stirred by such names as Cumberland, Point of Rocks and Harper's Ferry? And what traveler of the young generation at all familiar with the literature of our country will not remember when the brakeman calls out, "Frederick Junction," that it was at Fredericktown that old Barbara Fritchie waved the Stars and Stripes above the heads of Stonewall Jackson's passing columns?

"Shoot if you will this old gray head,
But spare your country's flag," said she.

A lengthy article from the pen of Rev. William Stevens Perry, Bishop of Iowa, was recently published in the Iowa *Churchman*, descriptive of his journey from Chicago to New York via Washington. Among other things he says: "One traveling eastward from Chicago via the Picturesque Baltimore & Ohio Railroad, finds rest and comfort in the Vestibuled Pullman Limited trains on which travel is no longer irksome, but luxurious. There are two of these trains daily from Chicago, one leaving 10:15 A. M. and the other at 6:25 P. M. It was on the morning train that we began our pleasure

journey across the plains and over the Alleghanies for New York. We had the enjoyable anticipation of going via Washington, for the Baltimore & Ohio alone, of all the many routes between the seaboard and the lakes, passes directly to and through the Capital City. It was night when we passed the Ohio River and began the ascent of the Alleghanies, on the summit of which are the twin resorts, Deer Park and Oakland. The last named is a pretty village shut in by towering mountains. A pretty church shows that the visitors at Deer Park take their religion with them into the hotel. The handsome cottages grouped about the hotel, the fine walks and drives in every direction, the salubrity of the air, and the coolness which is obtained when all the world below this elevation is feeling the oppressiveness of the heated term, make this an ideal spot for summering. At the base of the mountains we entered the Potomac Valley, which was debatable ground during the civil war. The streams and fields we cross, the ravines we tread, as we speed on to Washington, have their historic associations with internercine strife that pitted the Blue against the Gray. Across the mountains and down the Potomac we were greeted by a constant succession of most magnificent views which have gained for the Baltimore & Ohio the sobriquet of 'Picturesque B. & O.' Our route from Washington to New York was via the Royal Blue Line of the Baltimore & Ohio, which is composed of the staunchest and finest Coaches, Parlor and Sleeping Cars ever built by the Pullman Company, vestibuled from end to end, and protected by Pullman's improved anti-telescoping device. All the cars are heated by steam and lighted by Pintsch gas. They are the fastest trains in the world, placing New York and Washington within five hours' reach."

A New Material for Bath Tubs.

A Minneapolis concern—the Minneapolis Paving & Manufacturing Co.—seems to have struck upon a material for bath tubs that offers all the good qualities of both metal and porcelain and the bad qualities of neither. It is a composition that is yet (and likely to remain) a mystery to all but the manufacturers. It is extremely handsome in appearance, being a delicate creamy white in color, with a finish that is fully equal to that of the most expensive porcelain. These tubs, which are made in any size wanted, are finished on the outside in white, blue, red, rose, or green, and with gold decorations, if desired, at a small additional cost.

One of the strong points of these tubs is their sanitary qualities. They are entirely non-absorbent, so cannot possibly convey infection, and are very easily cleaned with a sponge. The "Acme" is certain to become popular in homes and in hotels, as the cost is moderate.

Illustrations of the Acme tubs may be seen in the advertisement of the M. P. & M. Co., in our June number. Circulars will be sent on application.

The Youghiogheny & Lehigh Coal Co.

One of the youngest coal companies at the head of the lakes has erected extensive docks at West Superior, where they handle their own production of genuine Youghiogheny coal with the best grades of Hocking and anthracite, specially prepared for this market. Large consumers and dealers are invited to correspond with them when in the market to buy. Address them at their main office at West Superior, Wis.



FA-C-SIMILE OF MONEY ORDER FORM IN USE BY NORTHERN PACIFIC EXPRESS CO.



Placer Mines in Oregon.

The placer mines of Southern Oregon, which promise to yield good, and, in some instances, rich returns this year, are not new and wonderful discoveries. In most instances they are the abandoned mines of a former era of adventure and speculation, a prominent feature of which was restlessness. A desire to move on, intensified by news of great gold discoveries elsewhere, led to the abandonment of many mines that were paying good wages at the time. The return to these mines is the natural consequence of the changed conditions of the times, and, from all indications, the output of gold from them this year will be large and the profits widely diffused. Few great fortunes will be made in these old placer mines of a past generation, but many broken fortunes will be repaired through their agency, which is much better for the community than an occasional strike of exceptional richness.—*Portland Oregonian*.

For the Man With Small Capital.

On yesterday's west-bound passenger train there was an old Scotchman, now living in Page County, Iowa, who was on his way to Missoula to visit a daughter. He expressed astonishment that there was no more of the land, by which the train passed, under cultivation. He could see as the train went by small fields of grain, that the land was good, and that all the growing crops looked first-class. He was all the more astonished when he learned of our thick vein of coal, and of

the fact that our land can be purchased for so low a figure as from \$3 an acre up. The old gentleman remarked (a fact that will occur to anyone who thinks the matter up) that this section of the country is indeed about the most desirable section left in the country for the man who, with but small capital, desires to settle somewhere where he can grow up with the country. In his conversation with his fellow passengers, he learned more than ever he knew before about the cheapness of hay, the extent of range for cattle, and the short length of the time that cattle and horses need feeding.—*Mandan (N. D.) Pioneer*.

Sheep Creek Falls.

The lower falls of Sheep Creek seems to be one of the most sought after pleasure resorts in Stevens County. It is situated in a deep canyon on the main Sheep Creek, and within three and a half miles of Northport. A good, easy trail which has been traveled over for thirty years by trappers and prospectors, connects these delightful falls with the ferry landing here.

The height of the falls is 100 feet and the drop is perpendicular. The water coming from such a height upon the hard, rocky bed below causes a continual spray to be thrown for some distance away from the banks of the stream, and a person standing within a hundred feet of the falls would be drenched through in a few moments. The sight is enchanting, as almost every hour of the day several rainbows are formed by the sun throwing its rays on the foaming waters below the falls. Here is where the sportsman is in paradise, as thousands of speckled beauties make their home on the rocky bed below the falls, and the mountains on either side are literally alive with grouse and other game. Berries of different kinds grow on the mountain side, making the lower falls of Sheep Creek complete as a pleasure resort.—*Northport (Wash.) News*.

PRINTING MATERIALS.

If you contemplate starting a newspaper, or purchasing a press, paper-cutter, or anything in the way of printing material, bear in mind that we are not connected with any trust and that our prices range considerably lower than any of our competitors. We are the Northwestern branch of Barnhart Bros. & Spindler, of Chicago, and can quote the same liberal prices and terms you can obtain from them, and being several hundred miles nearer to you we can save you money on freight and express charges, and also time.

Our type will give you more and better service than that of any other make, and costs you less money. We have several desirable second-hand cylinder and job presses on which we will quote very low prices. In new machinery we are exclusive Northwestern agents for the Babcock air-spring, tapeless-delivery cylinders, and will be glad to give Northwestern references to those interested. There is no better press on the market to-day than the Babcock, and we sell them at very reasonable figures. We also handle a full line of job presses, paper-cutters, etc.

We have just taken the agency for the Morrison wire stitching machines, and will be pleased to correspond with parties needing such a machine. We are now carrying a full line of wire for the various wire stitchers, and are selling it at about twenty-five per cent less than other houses have been charging. We honestly believe we can make it an object to deal with us, and shall appreciate an opportunity of corresponding with you.

Very Truly Yours,

MINNESOTA TYPE FOUNDRY CO.,
St. Paul, Minn.

Only 14¹ in United States in 1870 had population over 100,000 but in 1890, 28, and **THE NORTH-CITIES WESTERN LINE** is Best Line from Minneapolis and St. Paul to a large number of them.

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In the famous Columbia River and Kennewick valleys, in all sized tracts—5 to 100 acres, at very reasonable prices and on easy terms.

This is the greatest peach, fruit and hop region in the world. Write for information to

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Also owners of the original townsite of Kennewick. Business and residence lots on easy payments.

YAKIMA IRRIGATED LANDS. We have tracts of FIVE, TEN, TWENTY, FORTY and FIFTY acres of improved IRRIGATED LANDS, in FRUITS, HOPS and ALFALFA, ranging in price from \$50 to \$300 per acre, on reasonable terms. Write for circulars and information to

H. SPINNING & CO., North Yakima, Washington.



Peace Pipe Is enjoyed by Indians, but the traveler who likes comfort enjoys smoking best in the Buffet Smoking Coach on the **NORTH-WESTERN LIMITED**.

BUY DIRECT AND SAVE DEALER'S \$12 AND AGENT'S PROFITS.
Buy our Oxford Boss Bicycle, suitable for either sex, made of best materials, strong, substantial, accurately adjusted and fully warranted. Write to-day for our large complete catalogue of bicycles, parts, repairs, etc., etc.
OXFORD MFG. CO.
338 Wabash Avenue, - CHICAGO, ILL.

Savage Used to wage war where Minneapolis and St. Paul now stand. To-day these great cities Indians are inhabited by people of culture and good taste and they travel via **THE NORTH-WESTERN LINE**.

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Northwestern Financial and Realty concerns will find THE NORTHWEST MAGAZINE their best advertising medium.

Readers of this magazine who may wish to do business with the financial and real estate concerns advertising in these columns can rely upon their high character and responsibility.

WASHINGTON.

FIDELITY TRUST COMPANY.

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PAID UP CAPITAL, \$500,000.

Does a general banking business. Receives deposits, and liberal rates of interest paid on daily balances subject to check.

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Wheat Farms and Stock Ranges.

We have listed with us farms suitable for wheat raising, stock and fruit; also several ranches well stocked, having living water sufficient for the stock and household purposes. There are no better ranches than those of Eastern Washington. These farms offer great inducements to those desirous of engaging in the dairy business, and will be sold at a bargain.

Correspondence solicited.

Price of purchaser's ticket, from the point where train is taken, to Cheney, will be credited on first payment on land bought of us.

WARRANTS.—Parties wishing to invest either in gilded Mortgage Securities, or in State, County or School Warrants, will find it to their advantage to address

THOMAS J. WILDER & CO.,
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In tracts of ten acres and upwards, improved and unimproved; also desirable city property for sale.

The subscriber has had over eight years' practical experience in the Valley.

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There is no country on earth superior to Eastern Washington for fruit raising. We have a number of beautiful tracts of FRUIT LANDS at reasonable prices.

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These lands are as well adapted for general farming as any the sun shines on. Timothy hay brings \$15.00 a ton, and three tons to the acre is less than the average; while forty bushels of wheat to the acre is an uncommon yield. We have a number of these farms for sale.

STOCK RANCHES.

Our stock ranches cannot be excelled anywhere. We have for sale several choice STOCK RANCHES that buying them is simply exchanging a gold dollar for a gold dollar certificate. Write us.

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Collections throughout the Northwest promptly attended to. Eighteen years' experience. Best of reference freely given. Correspondence solicited.

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LONG HEADED MEN
NOW BUY LAND IN
NORTH DAKOTA.

A Good Colony Site.

Cheap land enough for the immediate settlement of a colony of fifty or sixty families. In the immediate vicinity of a new town on the Soo Line, in Stutsman County, North Dakota. This land is all good rich prairie. On most of the quarter sections will be found a few acres of swale where all the hay needed for the settler can be cut. These lands will be sold a \$4 an acre on the five-year credit plan or on half-erop payment plan. The country is handsome and healthy.

Address B. S. RUSSELL, General Agent Minnesota & Dakota Land and Investment Co., Jamestown, N. D. or apply at the general office of the company, Bank of Minnesota Building, St. Paul, Minn.

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Real Estate and Insurance Agent,

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Negotiation of Loans and General Collecting. Take charge of estates, make disbursements, pay taxes, etc. Refer by permission to THE NORTHWEST MAGAZINE.

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Associate Banks: Northwestern National Bank, Great Falls; First National Bank, Missoula; First National Bank, Butte.





NORTHWESTERN PROGRESS.

Wisconsin.

WORK will shortly be commenced on a survey for the bridges to connect Superior and Duluth. The one from Rice's to Connor's Point, in which the controlling interest is held by the Superior Rapid Transit Company and the Duluth Street Railway Co., are now arranging financial matters, and as soon as these arrangements are made, work will be pushed as rapidly as possible.

THE biggest land deal ever made in Taylor and Price counties was closed in Milwaukee a few weeks ago before Frederick Abbot, the Wisconsin Central commissioner, and Howard Morris, one of the Wisconsin Central receivers. It involves the sale of 50,000 acres of hemlock lands by the Wisconsin Central to J. J. Kennedy, of Rib Lake, a large lumberman in that place, and Fayette Shaw, the tanner at Medford. The land is in Taylor and Price counties. The average price paid is about \$5 an acre, as the whole deal aggregated \$250,000. The acquisition of this immense territory of timber land insures for the Kennedy sawmills a large supply of lumber for years to come, and to the Shaw tanneries an almost inexhaustible supply of hemlock bark.

Minnesota.

R. B. LANGDON, of Minneapolis, has taken a \$2,000,000 contract to reclaim desert land in Arizona by digging a canal 110 miles long.

SAYS THE Minneapolis *Spectator* of recent date: Our 1,800 enrollment at the State University passes all competitors except Harvard, Yale, Cornell and Ann Arbor. The latter lost 100, while Minnesota's institution gained 100. Let the effete East watch the smoke-stack of Northwestern "culturah."

THE mills at the head of the lakes made the greatest run in their history during the week ending June 2, turning out 95,358 barrels of flour, an average of 15,893 barrels daily, and 7,348 barrels more than the best previous record for a single week, which was 88,010 barrels during the week which ended Nov. 11 last.

REPRESENTATIVES of nearly all the railroad contractors in this part of the country have been looking over the line of the Brainerd and Northern Minnesota Railroad, the logging road of the Minnesota Logging Company, with a view to preparing their bids for the earthwork. The preliminary survey was completed some time ago, and the location is well along toward the finish. From letters received from F. W. Kimball, the chief engineer, it is known that he has been very successful in locating the line through country where it will be possible to construct the line with light grades and flat curves. Most of the location is through country where the cost of grading will be comparatively light. Construction this year will not carry the road as far as the southwest point of Leech Lake, but it is the intention of the company in future years to extend the line on towards the Northwest, continually tapping the extensive pine forests of the southern part of the State.

THE citizens of Little Falls, says the *Mississippi Valley Lumberman*, have good reason to congratulate themselves that they have such an enterprising and public-spirited concern in their city as the Pine Tree Lumber Company. There are a good many unemployed men in that town, and at a meeting of the directors of the Pine Tree Lumber Company last week, it was decided to operate the east side mill of the company this season, which has to the present time remained idle. It was not intended at the opening of the sawing season to operate this mill, as it could not be run profitably. Owing to the number of idle men it was decided to run it, however, to give them employment, and from now until the time it is ready to start, the big mill of the company will be run nights also. Only residents of Little Falls will be employed in the mill. This action on the part of the Pine Tree Lumber Company is deserving of commendation, and is one well worth imitation on the part of other mill men whose mills, wholly or in part, are idle this season.

North Dakota.

WM. DWYER said to the Jamestown *Alert* recently: Logan County has received about fifty new families this season, and the acreage of crops is fully one-

fourth greater than last year. Each season our farmers are breaking from thirty to fifty acres of new land. They are sowing more flax and general crops.

THE Fort Ransom Creamery has now commenced operations. The stock is about all subscribed for and the institution is on a sound financial basis.

THE Minot *Journal* asserts that maple syrup can be made, is made, in North Dakota from the sap of the box elder, which grows luxuriantly in this State.

W. W. SEEKNID, the Jamestown celery man, will plant out half a million celery plants this season. The James River Valley may yet equal the Kalamazoo celery district, as this delicacy grows nowhere to greater perfection than here.

IF it be true as reported that there are big phosphate deposits in the Bad Lands of North Dakota, that hitherto uninhabited region would be the seat of a great industry, remarks an exchange. Florida and South Carolina now send out annually 1,000,000 tons of phosphate which sells for six dollars a ton after it is mined and washed. It is claimed that an analysis shows that the deposits in the Bad Lands are exactly the same as those in Florida. New York capitalists are said to be investigating the matter.

AS a result of his trip to Indiana, Mr. Edwards thinks there will be several of the Dunkards up here this summer with their goods and chattels, prepared to locate and become Traill County citizens. Some of them would have been up here now were it not for the difficulty they have in disposing of their farms. Mr. Edwards found upon investigation that land worth \$100 an acre in Indiana does not yield the revenue derived from an acre of ground in Traill County, valued at only one-quarter that price.—*Mayville Tribune*.

ASSISTANT SUPT. EISENHUTH in Cando *Herald*: It will only be a few years now until the schools over the entire State will be self-supporting. In Morton County all the schools outside of Mandan are already supporting themselves and all the school tax that the citizens of that county have to pay is the State tax of two mills. Last year the apportionment of funds in the State amounted to an average of \$6 for each child of school age, and this year, despite the hard times, the average amount of each child will reach \$8. I believe that within a few years we will have a quarter of a million dollars to invest outside the State. It will soon be a question what to do with our funds. I believe the best thing to do is to invest it in the raising of the standard of our schools. North Dakota has the best school fund of any State in the Union. The finances were never in any better shape than at the present.

South Dakota.

GROUND has been broken in Custer City for a building 50x100 feet, for the manufacture of axle grease. The axle grease is to be made of ground mica, graphite and crude petroleum. The mica and graphite are found in abundance within two miles of town. The petroleum will come from oil springs thirty miles west of that place. Mineral paint will be made from plumbago and red ochre, both found in abundance near there. Soap will be made from the natural alkalies and petroleum found in Eastern Wyoming. An electric light plant for lighting the city and the hotels of Sylvan Lake, a pleasure resort six miles north of there, will be connected with the establishment. The company will also mine mica from their mines, cut that which is suitable for the market and grind the refuse from their own and other mines. The contract calls for the completion of the buildings now in course of construction on the first day of July. Contracts for other buildings will be let soon. In the mining and manufacturing of the different articles to be put out by this company employment will be given to about 300 people.

Montana.

THE Fergus County *Argus* says that an immense body of rich ore has been struck in the Spotted Horse mine, some of it running as high as \$3,000 to the ton.

IT is rumored that the Golden Sunlight mines, recently sold for half a million dollars by the American Development and Mining Company to a New York syndicate, are likely to change hands again for a million dollars, says the Butte *Inter Mountain*.

THE name of Mingusville will be changed to Wibaux as soon as the station is rechristened by the N. P. Railroad Company, which will be soon. Mr. Wibaux has several plans that will result in pushing the town rapidly to the front and be of permanent value to the whole tributary country.

AMONG the richest gold-bearing quartz ever discovered in Montana is that in the Little Rockies. Much of it, however, is on the Indian reservation, just

north of the Gold Bug and Gold Boy mines. An effort will be made to have that portion of the reservation, which is but a small portion thereof, thrown open.—*Helena Herald*.

THE Flathead Valley will attract a great deal of attention during the next few months as a mining country. Up to the present time but little else has been done than prospecting. Now development work has commenced in earnest and there are the brightest prospects for the richest returns. The Dayton Creek district on the south is spoken of in glowing terms by all who have visited it and prospected there. The claims that are now being worked there show up well. East of here development work is being done in the hills with equally bright prospects.—*Kalispell Graphic*.

THE coal supply of Montana is beginning to be appreciated by the country. While the East and South are suffering from fuel famine, owing to the protracted strike of the miners in those States, and the railroads centering in Chicago are greatly inconvenienced, this State is supplying the great transcontinental lines from its inexhaustible mines, which employ the highest priced labor. The Northern Pacific is abundantly supplied from its Montana mines, and the Great Northern now uses our coal as far east as Devil's Lake, N. D.—*Helena Independent*.

THERE is an inexhaustible deposit of stone on the Missouri River, about thirty-five miles east of Helena, that bids fair to become an important factor in the builders' art. The stone is destined to be used for ornamental purposes, and to many eyes it is more beautiful than Mexican onyx. It is of all colors, and nature has used the coloring matter to trace all sorts of pretty and curious designs upon and in the stone. The stone is quite soft when first quarried and is easily sawed or cut into any desired form. Exposure to the air hardens the stone sufficiently to make it durable. It takes a "dead" or wood finish, and will undoubtedly come into general use for interior decoration and for all sorts of tiling.

CAPT. Z. T. BURTON, of Choteau, Mont., leaves to-day with another excursion party for the Teton Valley, says the St. Paul *Globe* of May 30. The party comprises a large number of farmers who are looking for new locations. Mr. Burton has lately directed a healthy flow of immigration to that region, and many farmers from Illinois, Iowa, Wisconsin and even Kansas are settling in the Teton River Country, which promises to blossom out as an excellent farming region since the Choteau Water Company has completed its irrigation ditches. Mr. Burton says that the experiments which will be carried on there this summer by a large local seed house will be watched with great interest by the agriculturists of the country, who are anxious to see the results of the work on virgin prairie soil.

Idaho.

NOT since the rush to Boise Basin and the stampede to the upper Columbia in the early '60's has there been such activity in the placers. Hundreds of old diggings, mined superficially in the feverish days of thirty years ago, and abandoned because of a hope of better things and the excessive price of supplies and provisions, are being reclaimed and worked with profit. A great deal of virgin ground is also being staked out and developed, and in many places improved appliances and machinery return profits where primitive methods failed. The extraordinarily high water also makes it possible for miners to get at very rich ground hitherto beyond reach.—*Spokane Review*.

A PARTY of capitalists have lately located four miles of the South Fork of the Clearwater for placer-mining purposes, commencing at the reservation line and running up stream. They propose to work the bed of the river by means of some steam machinery which forces a jet of steam or cold air, condenses the vapor and thus creates a vacuum which is filled by the sediment on the bedrock. The bucket is then hoisted and the contents are prevented from escaping by a valve. On arriving at the surface the gravel is washed by ordinary placer process. The machine is an invention of an old Cœur d'Alene named Walker and was tested some years since on Feather River in California. The enterprise is to be inaugurated on the Clearwater this summer.—*Wardner News*.

Oregon.

A FEATURE of the Sloan and Haskell incidental clean-up in Grant County last week was the product of large nuggets. Many have been picked up during the clean-up, ranging from \$10 to \$30. There was one nugget valued at \$124, and another worth \$480.—*Oregonian*.

A TRACT of 540 acres of Crane Flat, half way between the Granite and La Bellevue camps, has been sold by J. W. Larkin and H. Robbins to John Rigby, of Seattle, representing a syndicate of capitalists, whose inten-

tion it is to put on the property machinery similar to that employed on the gravel bars of Snake River, near Pasco. It is estimated that the machinery will cost from \$25,000 to \$30,000.

Already over 100 homesteads have been taken in Klakitat by the Indians, and forty patents have been issued to them by the Government. The law does not permit them to sell or deed land until after the lapse of twenty-five years from the date of the patent issued. The Indians are permitted to homestead eighty acres for farming or 160 acres for grazing purposes, while a squaw at the head of a family can enter eighty or 160 acres of land for each one of her minor children.—*Oregonian*.

Washington.

The settler in Washington will find no frontier roughness, as was the case in early life in the West, nor encounter sectional or political prejudice as in the South.

The Washington Douglas fir, which grows plentifully west of the Cascades, is being used for water mains in Olympia and other towns, and a manufacturer is now in Minneapolis introducing it into the Twin Cities for eave troughs, etc. It is said to be more durable than metal.

A COMPANY has just been organized in Spokane that has for its object the purchase of the extensive property of the Spokane Water Power Company, and the making of vast improvements in the shape of flouring mills, sawmills, linseed oil mills, the development of waterpower and electric light plants. The corporation is capitalized at \$750,000.

OSCAR HUBER, one of the Government contract surveyors in Washington, says: "The survey in the Okanogan Valley is nearly completed, and there is enough placer ground to keep 5,000 men employed and give them wages that will average \$3 a day. Besides, the quartz and galena ledges are just as rich as the placers." The Okanogan Country is in North Central Washington and is reached from Wenatchee.

THE paper mill at La Camas employs sixty hands, with a monthly pay-roll of over \$2,500. It consumes annually 5,000 cords of fir wood, for which is paid at the mill \$11,000; 1,800 cords of cottonwood at \$3.25 per

cord, and 1,000 tons of straw. The daily out-put is eight tons news print and three tons of straw paper. At present the straw-manufacturing department is shut down, but this will only be so until the weather subsides.—*West Coast Trade*.

A NEW vein of better coal than has ever been mined in Western Washington has been struck at Wilkeson. It is over eight feet thick, and there are five feet eight inches of coal in it that does not have to be washed. The coal is bituminous, but has been formed under greater pressure than any other coal now mined, and runs high in carbon. An analysis shows about sixty-nine per cent of fixed carbon.

THE Loomiston Journal says two car-loads of narrow-gauge "T" rails have been received at Wenatchee and way bills for about fifty car-loads more iron and locomotives have been received by the freight agent at that place. The iron and machines are billed to F. H. Cook. It is his intention to at once commence the construction of a narrow-gauge railroad up the west bank of the California River to Swonsea, thence north on the Okanogan River to a point directly east of Loomiston.

ST. PAUL *Globe*, June 7: T. S. Patty, Chattanooga, Tenn., is in the city. He is the district passenger agent of the Northern Pacific at that point, and is doing his proportion of the labor involved in populating the West. He arrived here yesterday morning over the Wisconsin Central, bringing with him a party of settlers from his State. He said yesterday that others were to follow. "These people," he remarked, "are of a desirable class." They are all from various parts of Tennessee. They will locate at different points. Some will go to Tacoma, others to Seattle, some to Colfax, Wash., and the remainder to Medford, Oregon."

THE Seattle *Telegraph* quotes a prominent grocer of that city as saying that the dairies recently established in Washington had already saved the people many thousands of dollars and would prove a great source of wealth to the State. "We will soon be independent of any outside supply of butter and raise our own pork," he said. The *Telegraph* adds, "This means much. During the rushing times of a few years ago money went out of this State in a steady stream to pay for articles that can be produced here as well as anywhere

else in the world. This was unavoidable. When every man saw a fortune in selling corner lots he was not going to bother with making butter. Besides, a great deal of time was needed to get enough land under cultivation to supply the home demand. There is not enough now but soon will be, and when we have rural communities supplying the cities, business will be upon a solid basis. Dairy farming is a secret of solid prosperity, for it means good farming in all lines."

The Canadian Northwest.

NOTWITHSTANDING the depressed state of the financial market, there is a good demand for farm lands in Manitoba and the Northwest Territories. New-comers are investing freely, indicating that the immigration this season is of a good class.

THE fourth annual exhibition of the Winnipeg Industrial Association will be held this year from July 23 to July 28 inclusive. Prizes amounting to \$15,000 will be offered, many of the individual prizes being for large sums, so that liberal inducements are offered to draw out exhibits. A large portion of the prizes are offered for products of the soil, such as grains, roots, etc. The exhibition will therefore be largely one representing the agricultural resources of the country, though other departments are not neglected.—*Winnipeg Commercial*.

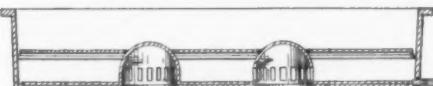
"THE question of irrigation in Alberta," said a gentleman to a Winnipeg *Free Press* man, "is bound to elicit the earnest attention of the government ere long. The action that has already been taken by private parties is already bearing good fruits, and I believe the Dominion government will shortly institute a complete system of surveys in order to secure all possible information concerning the water supplies, so that they may be conserved and the most efficient methods of utilizing them ascertained. With a good system of irrigation along the foot-hills the country could be turned into a vegetable garden."

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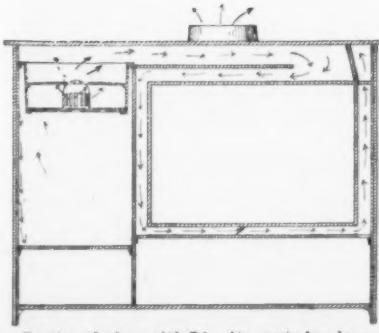
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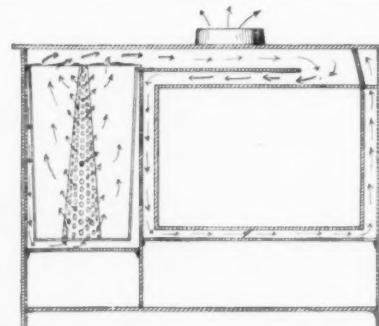


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A Good Barometer.

A plug of tobacco is as good a barometer as any one needs, says an exchange. As long as the weather is to be fine the tobacco will dry, and if there is not too much sugar and licorice in it, will crumble like bark. But just before rain the tobacco will get damp and flexible, and the moisture in the air will make it almost clammy. No one who chews tobacco need ever be without information as to a change in the weather if he will only watch his plug.

The Secret of It.

A member of a large hardware jobbing house in Chicago very recently remarked: "Had I enough salesmen to cover the whole of the country tributary to this distributing point, I should nevertheless continue to keep the firm name prominently before the trade in reliable journals. It not only makes the country trade familiar with it but it also makes the far-away dealer feel acquainted with us to see our name from week to week or from month to month in the paper he patronizes. Furthermore, it serves as an introduction to our traveling men and so paves the way for business with new customers."

Rest Up Gradually.

When a man dies from heart failure, after excessive exertion, it is because he rests too completely after the effort and allows too great a rush of blood to the left lung and region of the heart. Athletes early learn by experience that they must rest up gradually after heavy exertion. If a man runs a mile rapidly when overburdened with flesh, and then lies or sits down, he experiences a choking sensation, which sometimes leads to rupture of a blood vessel. If, on the other hand, he walks around until he cools off a little, the unpleasant sensation is not felt at all. When a man rushes rapidly to catch a train he ought to keep on his feet for a few minutes after he is through with the exertion, and if he cannot conveniently keep in motion he should breathe as freely as possible and be careful to keep the whole of his lungs busy for at least a minute. When he does this all risk is averted.

The Light From a Window.

That light which passes directly from the window to the eye is of no benefit, except as it enables one to see the outside view. Nearly all the light serves a far more useful purpose. It enters the window and sets in operation on a smaller scale the same phenomena that are taking place in the street. It is banded back and forth between walls, carpet, furniture and occupants. The light that these various surfaces reflect gives impressions of form and color by which we appreciate objects. By means of it we see our friends' faces, enjoy the pictures, read the book. It should be noted that light and color are entirely subjective. They are effects produced in the brain by different kinds of light undulations. We perceive the color of the upholstery and carpet because these have the faculty of sorting out undulations of special wave lengths and reflecting them. We perceive the outline of chair or of face partly by change of color, but chiefly by light and shade, the difference in intensity of the undulations coming from them and from objects behind them. To make the objects in the room

distinct the light entering the window must be conserved as much as possible. This will be best accomplished by banishing all dark materials. Heavy hangings absorb light as well as dirt. Oak or enameled furniture reflects the light that black walnut or rosewood absorbs, and a light-colored wall will do almost as much as a sunny disposition to fill a room with sunshine and good cheer.

—*Popular Science Monthly.*

Don't Laugh at Your Dog.

An extremely human characteristic of our canine friends is shown in their susceptibility to ridicule. Faint traces of this quality are to be found in monkeys and perhaps in more intelligent horses, but nowhere else save in man, and hardly there except in the more sensitive natures, do we find contempt expressed in laughter of the kind which conveys that emotion, so keenly and painfully appreciated. With those dogs which are endowed with a large human quality, such as our various breeds of hounds, it is possible by laughing in their faces not only to quell their rage, but to drive them to a distance. They seem in a way to be put to shame and at the same time hopelessly puzzled as to the nature of their predicament. In this connection we may note the very human feature that after you have cowed a dog by insistent laughter you can never hope to make friends with him again.—*Prof. N. S. Shaler, in the June Scribner.*

Is Pork Healthy?

Is pork a healthy diet? This inquiry is now being discussed by the swine breeders, cattle raisers and mutton growers—the former contending vigorously and from a scientific standpoint that it is, and the latter two that it is not. The *Texas Farm Journal* heads its article in the affirmative of the contention, and it will maintain that the hog is the natural meat for the human family, and that he is less amenable to the accusation of unhealthiness than any other animal used for food. If we appeal to the experience of mankind in support of the proposition, abundant proof will be found in the armies and navies of the world along the lines of the world's history, and if we go to the mercantile and manufacturing countries the voice of experience will show that no meat is more free from disease germs than the salt pork and bacon; but it is on the farm and in the rural districts that the most undoubted testimony is found, for there it is that the family, including the women and children, feed mostly on spareribs, backbones, jolts, shoulders and hams, either green, salt or smoked, and as the custom has been going on for thousands of years with satisfactory results, the plain, common sense, robust country people can never have their faith in the healthfulness of the hog shaken.

Now there is a wide difference between city killed and served pork and sausage and the country product. The good, pure, country leaf-lard, highly seasoned sausages, sugar-cured hams and bacon have nothing in them to make people sick, and have never yet been produced in sufficiency to supply the demand. Compare these products with the average goods of same class sold in the city markets; the country sausage is composed of the best lean hog meat raised, with some choice pieces of fat, seasoned with pure black and cayenne pepper, sage, thyme and other delicate seasoning to suit the taste of producer. The city article may be composed of a bull or cow, poor sheep or other unknown meats, mixed with dirty fat and highly seasoned with salt to kill the taste and deceive the consumer. For the article eight and ten cents is exacted, and it no more compares with the sweet, wholesome product of the farm than buzzard to spring chicken. The truth is our American hog is disgraced only when sold as "sausage;" otherwise he is the peer of any animal as a healthy food for all humanity.

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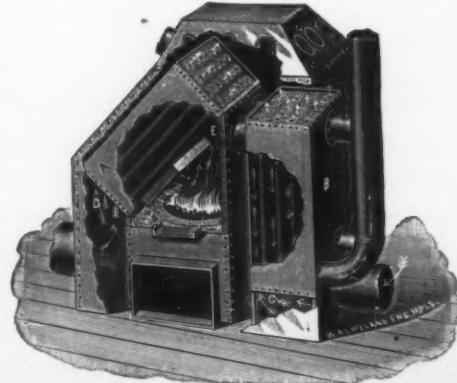
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THJUGHT HE WAS BURIED ALIVE.

In a grove of oak trees, near a road that passes through the Tiger Hills in Manitoba, there is an old earth cave or dug-out where some enterprising settler had his temporary abode while performing his homestead duties, on a much broken quarter-section. The entrance is not on the side next the road and so is not easily seen, and many think that the mound is a grave, to which it bears some resemblance. Last winter a somewhat thirsty Scotchman was so delighted with the election of Joe Martin that he remained in town drinking the health of the successful candidate "until he had injured his own." On his way home—the sleigh not being provided with a box—the enthusiastic Liberal fell fast asleep and accidentally rolled off in the snow, taking the fur robe that covered his feet with him. As the snow was quite soft the man did not immediately awake, and the driver, unconscious that he had lost a passenger, went on. The Scotchman soon discovered that he was off the sleigh and called loudly, but the teamster had his coat collar up over his ears and did not hear. The unfortunate derelict was in no condition for walking and there was no house near, so he stood some chance of freezing to death and commenced to look around for shelter. Either by accident or by the instinct that sometimes seems to guide a tipsy man, or, perhaps, having some vague remembrance of the situation of the underground apartment, he stumbled into the den, drawing the robe after him. Finding it quite warm in there he closed the rude door, wrapped the rug around his feet and legs, buttoned his fur coat, and taking a generous draw from the bottle, which he still carried in his pocket, he went to sleep. In meantime the falling snow, moving before a light wind, had drifted into the passage that led to the door, shutting out every ray of light and giving a general smoothness to the landscape. When the astonished man awoke late in the morning he could not tell where he was in the utter darkness. He had no recollection of the events of the previous evening, and on reaching out his hands he found earthen walls on every side and thought that he must have been buried alive. The more he thought of the situation the more terrified and horror stricken did he become. Just then he thought he heard the faint sound of horse bells and believed that it would be a good time to halloo.

A Canadian and a Frenchman from the adjoining settlement were on their way to the hills for firewood, and as the road passed quite near the old earth cave, the men were startled and astonished to hear strange cries of distress coming from under ground. They stopped the horses and looked in every direction, but no human being could be seen. Still the noise continued.

"Where in thunder are you!" exclaimed the Canadian.

"I dinna ken, but I am buried alive any way," were the sounds that came from below.

"There is one old grave there!" exclaimed the Frenchman, "but how the ded man came alive now I do not know. Very strange."

"Are you a ghost?" shouted the Canadian.

"No," said the man in the hole, "but I soon will be if you do not dig me out."

"How did you get in there?" shouted the Canadian.

"I dinna ken," replied the voice from below, "but I am mair concerned how I am to get out than about how I got in."

"Are you one evil spirit?" inquired the superstitious Frenchman.

"No, I am a guid Presbyterian and am in favor of national schools, the election of Joe Martin and the downfall of popery," replied the voice from below—the nationality of the Frenchman

having been discovered by the Scot, who was determined to stick to his principles.

"Well, you be in purgatory just now, old man," replied the Frenchman.

"There's na such place," said the persistent Scotchman.

"Have you anything to eat down there?" inquired the amused Canadian, who guessed that the man had fallen into a hole and been snowed over.

"No," replied the Scotchman, "but I ha' a bottle o' guld whiskey."

At this the Frenchman pricked up his ears and commenced to tramp around. The passage leading to the entrance was discovered, the snow kicked away, and the door pushed in. The Scotchman came out on all fours and exclaimed, "How the diel got I in therel!" The little Frenchman brought out the bottle and the rug. All had a dram and the liberated supporter of national schools was taken home on the sleigh.—*Pilot Mound (Man.) Sentinel.*

THE WORLD MOVES.

Referring to articles published elsewhere in this issue we beg to say that there is nothing to prevent our friend, Mr. Gattingby, or E. R. P., from adopting the sickle and flail on his own farm. He could not compete with his fellow farmers, it is true, but he would enjoy the privilege of remaining in the rut of fifty years ago. There is no law to prevent all of our Northwestern farmers from using the sickle and the flail, but they could not thus meet the competition of Russia, India and the rest of the world. We sometimes do not realize what an insignificant part we play in this great world. We can stop, but the world moves on. Brain is developing all about us. Shall we hesitate to advance with our competitors? The man who advances is the one who is able most quickly to adapt his methods to actual conditions. It may be that circumstances are such that for the present we cannot do so. But the cow chewing her cud in the shady pasture is more content than is man; yet what man desires to change himself into a cud-chewing cow? After all it is not what we have, but what we want and cannot get, that makes us suffer. It is not the threshing machine that makes the trouble, it is the 1850 spirit of happy-go-easy, much muscle and little thought,—much brawn and comparatively little science,—which is trying to impede the spirit of 1900, when the farmer will do his work with science applied to every branch of agriculture, for the conditions are ever restless, ever changing, ever marching on with a sweeping, irresistible tide of progress, and one might as well throw himself into the meshes of some gigantic machine and seek to stop its ponderous motion, as to shut his eyes to-day to the inevitable progress of civilization. That we are happier or less happy than fifty years ago is not a reasonable question for practical men to discuss. The higher the civilization, the higher the development of our brains, the more sensitive we become to happiness and suffering. If we are not happier, it is because we do not get into harmony with our age and conditions.—*Northwestern Agriculturist.*

ON THE CHU.—The Chinese have a remarkable superstition about the Chu River, which is the local name on the border for the Chiating. A considerable trade in drugs is borne along this river, for which a special class of boats, composed of very light boards, fastened with wooden nails, is built. The natives say that the magnetic attraction of the bed of the river is so strong that were ordinary boats used the iron nails would be pulled out. Along the river banks iron is mined in primitive fashion, and from geological evidence it is believed that the ore is very rich.

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WANTED ITALY THROWN IN.

Mme. Parvenoo—"I want a first-class ticket to Rome." Agent (representing the Tourists' International Company)—"Yes, ma'am."

Mme. Parvenoo—"And I want it to include an excursion to Italy, do you understand?"—*Chicago Record*.

AN EMBARRASSING MISTAKE.

Less than 100 miles from Miles City an old man and his son started out on a "maverick" branding expedition. The son, on account of his age, was more successful, leading the old man by several. The latter, becoming desperate, began roping and branding right and left, and as his own cows came home that night two were found with calves by their sides with the brand on that the old man had been using all day. He had branded his own calves as mavericks.—*Stock Journal*.

EVIDENCE OF CIVILIZATION.

"You fellows think we are not civilized down in Oklahoma," said the tourist from the West, "but when I tell you that we have sixteen men under indictment for horse-stealing perhaps you'll change your mind."

"Can't see where the civilization comes in on that score."

"Don't, eh? Seems to me when a community goes to the trouble of indicting a horse thief it's getting pretty well along."

A PERPLEXED CHILD.

Elsie (at six)—"Mamma, tell me—where were you born?"

Mamma—"In Edinburgh, darling."

Elsie—"But I was born in London, wasn't I?"

Mamma—"Yes, dear."

Elsie—"And papa—where was he born?"

Mamma—"Oh, papa was born in Dublin, I think. But why do you ask such questions?"

Elsie (reflectively)—"What a funny thing that we should all have met together like this!"—*To-day*.

A LITERAL TRANSLATION.

It was in a Latin class, and a dull boy was wrestling with the sentence, "Rex fugit," which, with a painful slowness of emphasis, he had rendered, "The king flees."

But in what other tense can the verb 'fugit' be found?" asked the teacher.

A long scratching of the head, and a final answer of "Perfect," owing to a whispered prompting.

"And how would you translate it then?"

"Why, put a 'has' in it."

Again the tardy emphasis drawled out: "The king has fleas."—*Waterbury American*.

WHEN THE BAND GITS OUT.

"Bout the finest thing I know ov, when its been hotter 'n Ole Fort Wool,

An' the sun's below the level, an' the air iz nice an' cool,

Iz ter git right on ter Main Street, an' ride or walk about;

But its something ter remember, when the band gits out.

Everyone that's got a horse, a buggy or a wheel

Gits right ter the center ov the street an' makes the durn thing speel:

While the boys they get ter rasselin' an' playin' tag an' shout;

I tell yeh things ar' lively, when the band gits out.

The whole town gits right up in front an' circles 'round the band;

While them that's got a horse or bike go ter pawin' sand.

People seems ter lose their heads, but then I skurzely doubt.

If its possible ter do otherwise, when the band gits out.

—*Pop Parker in Buzeman Chronicle*.

A FIRST-CLASS FINANCIER.

A motorman on an electric car line in Spokane is quoted in a Seattle paper as telling this story: "My 'boss'" (referring to the president of the street car company) "is a first-class financier, he is. Why, do you know that every Sunday he advertises for a servant, and Monday twenty or thirty girls ride out to his house near the end of the line to get the place, but find madam can't see them; so they ride back and repeat the journey several times before they are finally told that the old girl has decided to stay awhile. Now,

that's financing. Fifty cents paid out for advertisements, and \$8 or \$9 taken in for car fares to swell the annual dividends of the boss's company."

EXCURSION TICKET FOR THE CORPSE.

While an excursion train to Alabama was waiting at the depot a negro appeared at the ticket window and purchased a ticket for himself. Then he said to the ticket agent:

"Boss, I want a nuder round trip excursion ticket for a corpse."

The agent opened his eyes in astonishment. An excursion ticket for a corpse was something new to him.

The negro explained: "You see, boss, my brudder died yesterday, and I want to take de corpse down to Montgomery and let the family view the 'mains, and den bring 'em back to Birmingham and bury him. Dis will be a heap cheaper den fer de family to come up here."—*Marietta (Ga.) Journal*.

DIDN'T FIND HIM.

In the headquarters building, at the Soldiers' Home, Minnehaha Park, Sunday afternoon, four dejected and forlorn maidens stood at the piano for a full half hour and shrieked, "Oh, Where Is My Wandering Boy To-night?" The white-haired veteran in charge of the room paced up and down nervously, and finally inquired brusquely during a lull in the shrieks, "Well, have you found that wandering boy yet?" The maidens took the hint and went out into the park to find him. At sundown, however, I noticed the same feminine quartet getting aboard a street car in a crestfallen way, minus any wandering boy. They had been unable to "catch on;" which illustrates the wisdom of the statesman's axiom: "Don't go duck-hunting with a brass band."—*Minneapolis Spectator*.

A TRUE HELPMATE.

Wife—"I have made two hundred dollars this afternoon."

Husband—"Pew!"

"You paid only three hundred for that old piano, didn't you?"

"Yes."

"Well, I have sold it for five hundred."

"My! my! What are you going to do with the money?"

"There isn't any money."

"Eh?"

"I sold it to a dealer. He gives me a new piano for a thousand dollars and allows me five hundred for the old one. If you'd stay at home and let me go to your office and attend to your business, you'd soon be rich. Just think! Two hundred dollars a day is seventy-three thousand a year."—*New York Weekly*.

AT POLICE HEADQUARTERS.

Queer incidents happen at times in and about police headquarters. The other day the telephone rang violently and an officer sprang to the instrument in hot haste. There was murder in that ring.

"Send an officer to my place at once," exclaimed an agitated female voice.

"What do you want; what has happened?"

"A thief has stolen my—my—chem—chemise from the line, and I want him arrested."

"Come down and swear out a warrant for him tomorrow."

"That's what you always say. You make me sick."

"I hope not seriously, ma'am."

"Sir?"

"I said don't take your loss too seriously, ma'am;" but the conversation ceased with a snap before anything further could be said.

A woman with sorrow painted an inch deep on her face entered Supt. Smith's office the other day. "I come to ask your advice," she remarked in a voice full of tears.

"What is it, my good woman?" asked the chief, like a benign providence.

"My neighbor has taken my chicken coop and put it in her yard."

"Is it there now?"

"Yes."

"Go and carry it back into your own yard."

Her clouded countenance cleared into an expression of gratitude and relief as she replied, "I never thought of that."

A German, with his head in a sling, appeared before the superintendent a short time ago.

"A fellow hit me last night. He hit me by the head and I fall down. I want him arrested."

"Who was he?"

"I don't know. It was dark. Will you send an officer and arrest him?"

"Can you describe him?"

"No; it was dark."

"Yes, I'll send an officer, and if he sees him he will arrest him."

"All right, das goot. Thank you. Have him arrested rite away, he hurt me," and the complainant went his way with a smile on his face."—*Minneapolis Tribune*.

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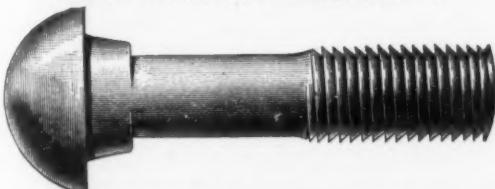
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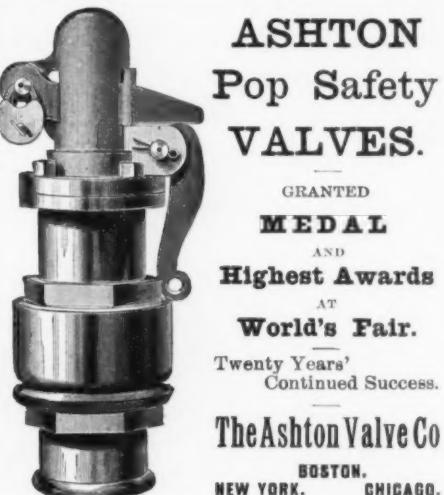
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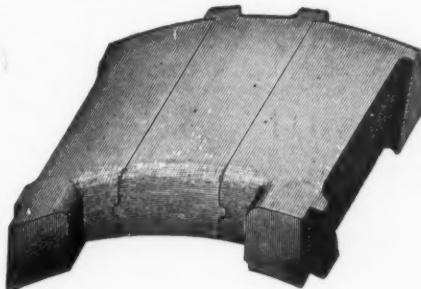
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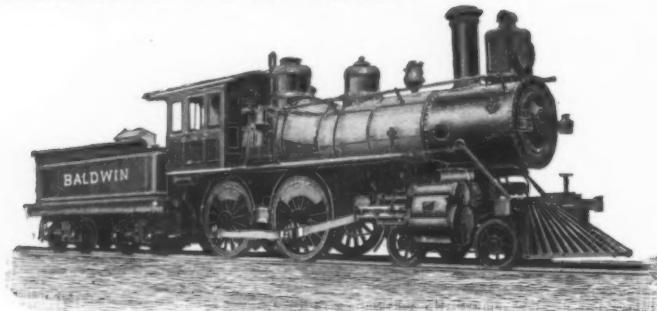
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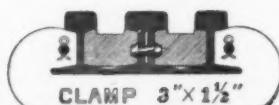
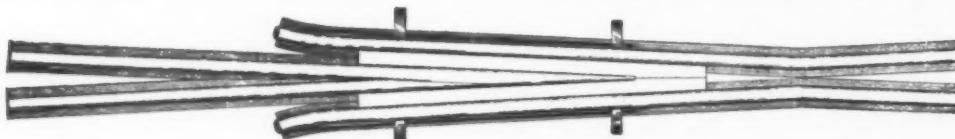
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Galena Oils are in exclusive use upon three continuous lines of railway from Boston and New York to the Pacific Coast, and upon one continuous line from the City of Mexico to New York, thus demonstrating their adaptability to all temperatures and climates. Inasmuch as they are entirely free from gum, these oils are not affected by dust and sand as are other oils.

We have in connection with our business, a well organized mechanical experts department, composed of skillful mechanics and railway men of long experience. The services of our experts are furnished to our patrons free of charge.

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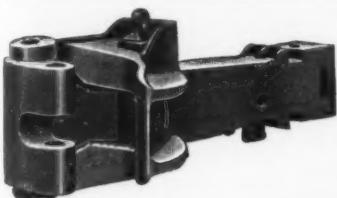
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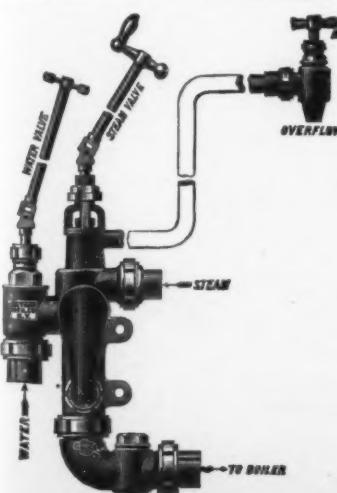
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AN ACRE OF FIR TIMBER.—F. I. Mead, of Tacoma, has been down in Chehalis County, and reports measuring an acre in which were fourteen fir trees, the smallest one of which was six feet in diameter, and the largest ten feet. The average distance to the first limbs is 150 feet. One tree, which was lying down, is 300 feet long and 175 feet to the first limb.

TO DISCOURAGE FLIES.—Here is a simple remedy for fly time which is now upon us. It is said that one of the simplest ways of getting rid of flies is to sponge the window sills with strong carbolic acid applied when the sun is shining on the windows and the flies are most numerous about it. The flies die in a very short time and can be swept up and the window washed to prevent any disastrous consequences to the children.

NOVEL TOWELS.—One of the strangest mineral substances, by the way, is asbestos. It is a form of horn-blende rock, which has a fibrous consistency, so that the material may actually be woven. Towels are made of it nowadays. They are quite economical, for when they are dirty it is only necessary to throw them into the fire, and on being withdrawn from the flames a few minutes later, they are as good as new and quite clean. The stuff is used for paper stock, fireproof paints for stage scenery, and gloves for handling red-hot iron. It was well known to the ancients, who employed it for napkins and lampwicks, and also for wrapping bodies that were burned, to keep the ashes from being lost.—*Boston Transcript*.

GLASS BRICKS.—In Switzerland there is made a glass brick, or a brown building block, formed flask-shape, with a short neck at each end and measuring eight inches in length, six in width, and two and a half inches in depth. Running through the center is an air chamber. The edges of the brick are covered, recessed or ribbed and grooved to receive, when laid, a suitable cement of plastic material, of such character that after it has hardened it will constitute a suitable frame or setting to keep the entire mass, roof or wall solidly together. The forms of molds, says an exchange, are pleasing to the eye, the line of ridges being clear and smooth, and of sufficient thickness or strength to stand a pressure of 150 to 200 pounds to the square foot.

ICELANDIC SHOES.—The Icelanders, in Manitoba, have a most economical way of providing a substitute for shoes. Hides are of little value in this country, and when an animal is killed the Icelander removes from the skin all the flesh and fat, and then cure or dress the hide by soaking in a strong decoction of salt and water in which a quantity of alum has been dissolved. The skin is then properly dressed, and when the shoes are required, portions are cut out to a proper shape, and when in a wet condition are stretched on wooden lasts of the size required and secured by a few tacks. When the skin has become dry the last is removed and a tongue is sewed in after the manner of a moccasin. If to be worn in winter a legging is added to keep out the snow. Sometimes the hair is shaved off and sometimes it is left on in the inside to increase the warmth. These home-made shoes have been found quite serviceable in dry or frosty weather, and are worn both in summer and winter.—*Pilot Mound Sentinel*.



There are fifty-one metals. If you have gold you need not bother with the other fifty.

There is one thing about a house which never haunts any of the occupants when it falls—the rent.

The armless freak who plays the piano with his feet comes nearer having music in his sole than any man yet heard of.

A Boston man reading that there were 4,000 Poles in New York, exclaimed: "What a splendid place to raise beans!"—*Terax Siftings*.

Young man, don't be afraid to push your way in the world. Remember the richest man now living was born without a penny in his pocket.

Watts—"Did you ever hear of a woman putting a fine monument on the grave of her husband after he had been dead so long as five years?"

Potts—"Once. She did it to spite her second."



"Let us not waste our time in dealing with the small saloons and grog shops. Let us go to the fountain-head—to the brewery!" "All right," chimed in Mr. Soaker from a back seat. "I'm with you!"

Tutor—"Under what name do you designate the science of legislation as carried on, say, in Congress?" Student (promptly)—"Pneumatics."

"My sweetheart is neither beautiful nor young," said Downes. "But she is as good as gold." "Ah! It's the gold you're after!" said Bigsble.

"Ha! Another railroad tie-up!" ejaculated Signor Bonnstrommer, the renowned tragedian, stumbling over it, and digging his nose in the gravel.

Would-be-Settler—"How is the death rate about here?" Old Citizen—"Wal. It's pretty cheap just now since the town doctors got to cuttin' prices."

"Wal, now, if that don't beat all. I've just been readin' about them Colorado rain makers. And now I see they've got a clearing house in New York!"—*Life*.

"Wine and women" go together in the song; but there is this difference: that wine always grows dearer as it grows older. This is not always the case with women.

Mrs. Henpeck—"Ah, those sad, sad words, 'it might have been'!"

Mr. Henpeck (feebly)—"That's all right, my dear, but they're not in it with those sad, sad words, 'it was'."

None of the gentlemen who write anecdotes about the sagacity of animals have plied their pens to cele-

bate the fact that a Pennsylvania eagle that carried off a bottle of hair restorer turned out to be a bald eagle.

Young Mistress—"Patrick, you haven't given fresh water to the codfish."

Patrick—"No, miss; they ain't drunk wot they had already."

Judge—"You are charged with having six wives. Have you anything to say for yourself?"

Prisoner—"I was only trying to pick out a good one, your honor."

If each of us knew his own business one-half as well as he knows everybody else's, what a wonderful amount of work would be accomplished in this world every day in the year!

He'll soon be raking the shekels in.

And with the rich he will associate;

He has just invented a safety pin

For keeping a woman's hat on straight.

—*Missouriian*.

Talkum—"Professor Garner says that monkeys do not actually converse, but confine themselves to single remarks on matters of importance."

Thinkum—"Dear me! How man has degenerated."—*New York Weekly*.

Druggist—"Yes, madam, I remember very well your buying a stamp."

Lady—"Well, I put it on a very important letter and mailed it. It has not been received. I want you to understand that I shall buy my stamps elsewhere if this occurs again."

A PROFOUND THOUGHT.—A writer in the *Midland Monthly*, Iowa's new magazine, makes one of the characters state dramatically, "The blood of two sexes flows in my veins."

Prominent Citizen—"The Senate is deteriorating."

Ward Heeler—"Not at all! Why, I remember when it only cost a senator \$20,000 to get his job, and now he can't get it for less than \$100,000."

"I wonder if it is really true that fish is a brain food?" "Well I'm sure they have some effect, for every time my husband goes fishing, when he comes home he seems too dizzy to stand up."

Proud Mother—"To think I should be the mother of a Congressman."

Sympathetic Neighbor—"Oh, I wouldn't worry. If he's not led astray by some young school girl people will forget it in time."

Jinks—"What a hopeless Anglomaniac Biffins has become."

Biffins—"He has?"

Jinks—"I saw him at the club, last night, laughing over *London Punch*."

Foreigner—"What means this great procession of bicyclists?"

Citizen—"That is the new Army of Peace going to Washington to demand that Congress abolish all tack factories and root up all bushes that bear thorns."—*New York Weekly*.

First Boy—"If you don't shut up, I'll lick you."

Second Boy—"If you think you can lick me, just come on and try it. You needn't stand there jawin' like a professional pugilist."—*Good News*.

Old Lady—"What's that awful smell?"

Arkansas Farmer—"That's the fertilizer we're puttin' on the field yester."

Old Lady—"For the land's sake!"

Farmer—"Yes, 'm."—*Ark. Tom Cat*.

Father—"Yes, I admit that your lover has a good income, but he has very expensive tastes, very."

Daughter—"You amaze me. What does he ever want that is so very expensive?"

Father—"Well, you, for one thing."

"Young man," said the evangelist, "do you realize that when you retire at night you may be called before morning dawns?"

"I hope so; I'm a young doctor, and I need encouragement of some kind."—*Ark. Tom Cat*.

Little Johnny—"Solomon was the wisest man, but Adam was the luckiest."

"Little Ethel—"Why was he?"

Little Johnny—"Cause when Adam was a boy there wasn't a school house in the whole world."—*Good News*.

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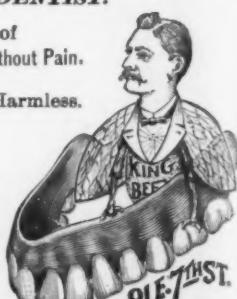
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* Land is increasing in value every day. In time it will be as high priced as it is in England.

* Land is the basis of all wealth.

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* It cannot run away.

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* It is the safest investment on earth.

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* Minnesota, Montana, Idaho and Washington contain the only forests of valuable timber remaining in the republic.

* The Northwest invites everybody. There is a good deal of everything to be found there.

* The new transcontinental line of the Great Northwest gives transportation facilities to large areas of new farming, grazing, lumbering and mining country.

* For publications and information about rates, routes, localities, etc., in the Northwest, address F. I. Whiting, G. P. & T. A., St. Paul, Minn.

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In Montana,	" 17,450,000 Acres
In Northern Idaho,	" 1,750,000 Acres
In Washington and Oregon,	" 9,375,000 Acres

AGGREGATING OVER

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When lands situated in Washington, Idaho and Oregon are purchased on five years' time, one-fifth cash is required at time of purchase. At the end of the first year the interest only on the unpaid amount is required. One-fifth of the principal and interest becomes due at the end of each of the next four years. Interest at 7 per cent per annum.

For prices and terms of sale of lands and town lots in Washington, Idaho and Oregon, Western Land District of the Northern Pacific Railroad, apply to

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A SECTIONAL LAND MAP OF NORTH DAKOTA, showing the Government lands open to settlers, and those taken up, and the railroad lands for sale and those sold in the district covered by the map. It contains descriptive matter concerning the country, soil, climate and productions, and the large areas of unsold agricultural and pastoral lands adapted to diversified farming in connection with stock raising.

A SECTIONAL LAND MAP OF EASTERN WASHINGTON AND NORTHERN IDAHO, showing the unoccupied and occupied Government lands, the sold and unsold railroad lands, with descriptive matter relating to this portion of the Northern Pacific country. This region contains large areas of fine agricultural lands and grazing ranges, rich mineral districts and valuable bodies of timber.

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A MONTANA MAP, showing the Land Grant of the Northern Pacific R. R. Co., and the Government surveys in the district covered by the map, with descriptions of the country, its grazing ranges, mineral districts, forests, and agricultural sections.

When writing for publications, include the names and addresses of acquaintances, and copies will be sent to them also.

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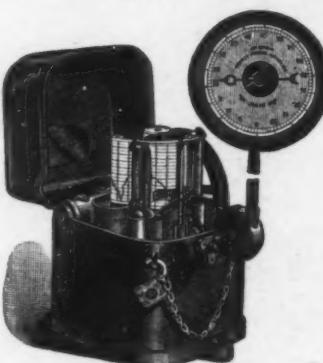
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